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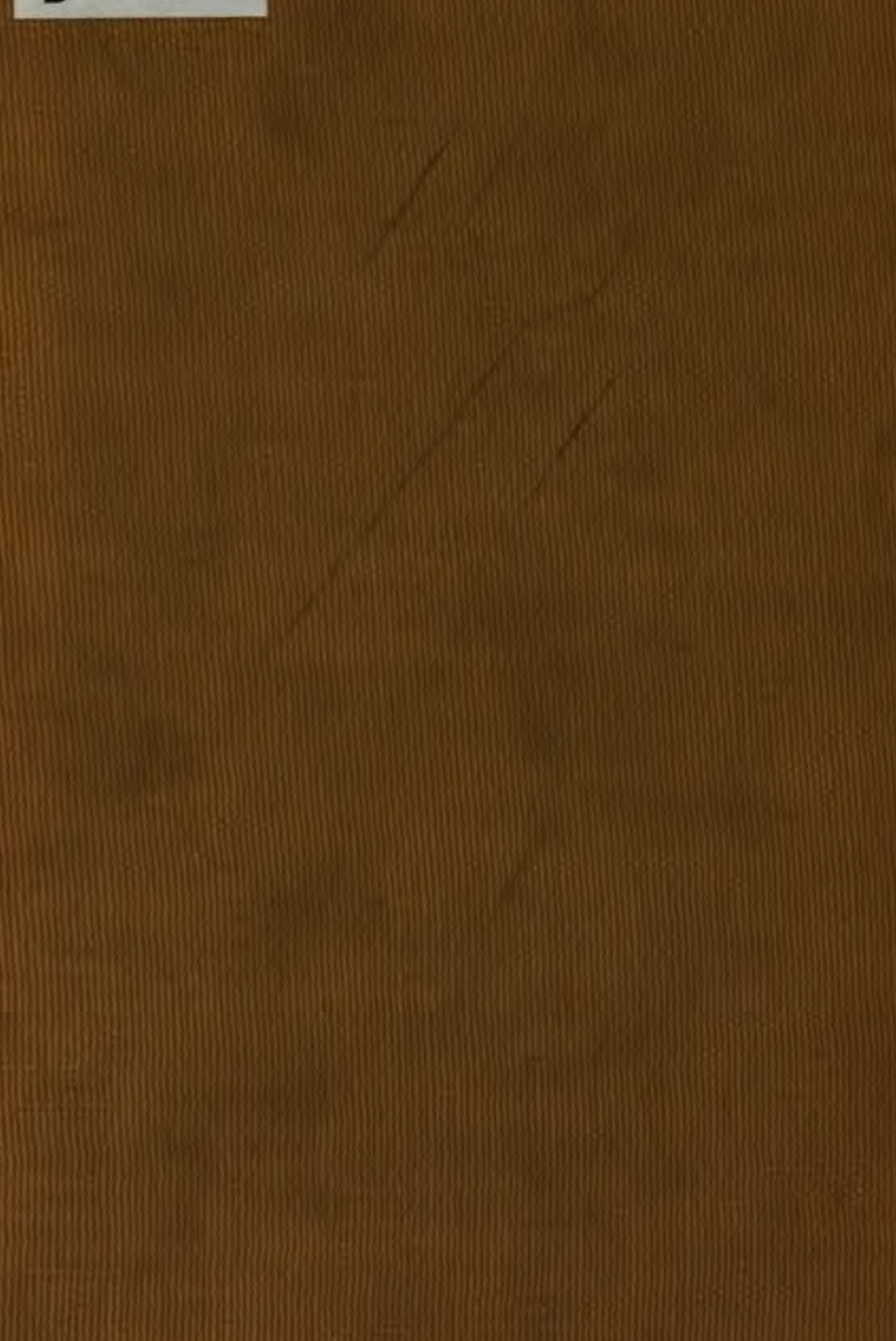
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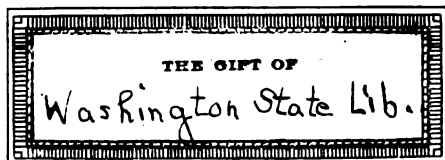
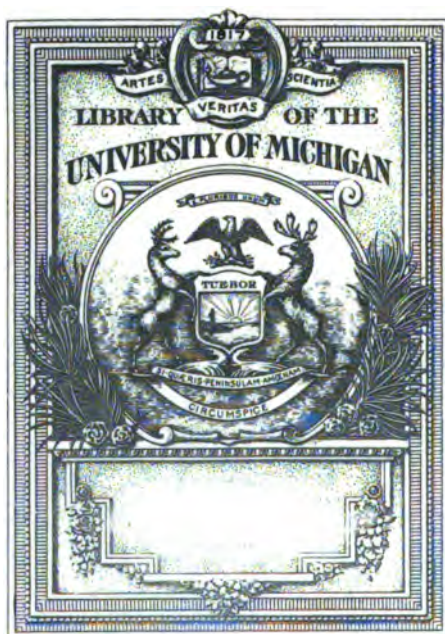
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Washington (State)

Third Biennial Report

OF THE

Department of Agriculture

OF THE

State of Washington

TO THE

GOVERNOR

July 1, 1916, to June 30, 1918



OLYMPIA, WASH.
FRANK M. LAMBORN  PUBLIC PRINTER
1918

LETTER OF TRANSMITTAL.

**STATE OF WASHINGTON,
DEPARTMENT OF AGRICULTURE.**

Olympia, November 1, 1918.

To His Excellency, Ernest Lister, Governor.

Sir: Complying with the laws, I have the honor to submit herewith the Third Biennial Report of this Department, covering the period—July 1, 1916, to June 30, 1918.

Certain important subjects are brought down to date in the written portions; this information, together with all statistics concerning the period since June 30, 1918, will also be included in the next biennial report.

Respectfully submitted,

**E. F. BENSON,
Commissioner of Agriculture.**

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(Secretary until March 31, 1917.)
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(Secretary from and after April 1, 1917.)

DIVISION CHIEFS.

Dairy and Livestock Division.

Dr. H. T. Graves, Chief until April 30, 1917.
Dr. R. J. Donohue, Chief from and after May 1, 1917.

Horticultural Division.

T. O. Morrison, Chief until May 19, 1917.
M. L. Dean, Chief from and after May 26, 1917.

Division of Foods, Feeds, Fertilizers, Drugs, Oils and Bakery Inspection.

J. J. Higgins, Chief of Division until deceased August 3, 1917.
Will H. Adams, Chief of Division from and after August 4, 1917.

Chemists.

Prof. C. W. Johnson, Seattle, Washington.
Prof. George A. Olson, Pullman, Washington.
Miss M. Y. Orosa, Assistant, Seattle, Washington.
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C. G. King, Pullman, Washington.

Bacteriologists.

Mrs. Marjory Higgins, Seattle, Washington.
Dr. C. A. Magoon, Pullman, Washington.
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Seed Analyst.

Katherine G. Stone, until April 30, 1918, Olympia, Washington.
Alex Galbraith, from and after May 7, 1918, Olympia, Washington.

Veterinary Inspectors.

Dr. J. H. Martin, Spokane, Washington.
Dr. L. C. Pelton, Seattle, Washington.

Dairy Inspectors.

G. G. Carman, Chehalis, Washington.
A. D. Fish, Seattle, Washington.
O. C. Van Houten, Seattle, Washington.
L. C. Renard, Olympia, Washington.

District Horticultural Inspectors.

P. S. Darlington, Wenatchee, Washington.
J. C. Eakle, Seattle, Washington.
I. R. Fletcher, Camas, Washington.
Henry Huff, Sumner, Washington.
E. B. Kelley, Spokane, Washington.
Harry L. Miller, Walla Walla, Washington.
E. F. Perry, Chehalis, Washington.
Luke Powell, Prosser, Washington.
F. N. Rhodes, Seattle, Washington.
C. B. Wood, Yakima, Washington.

Inspectors of Fourth Division.

Edward L. Jones, Drug Inspector, Spokane, Washington.
Geo. S. Henderson, Food Inspector, Seattle, Washington.
Harry H. Collier, Feed Inspector, South Tacoma, Washington.
Mrs. W. H. Coffin, Bakery Inspector, Tacoma, Washington.
S. P. Wilson, Chief Oil Inspector, Seattle, Washington.
I. W. Groves, Oil Inspector, Seattle, Washington.
B. M. Fowler, Oil Inspector, Spokane, Washington.
B. H. Goldstein, Oil Inspector, Portland, Oregon.

Office Force.

F. H. Gloyd, Secretary to Commissioner and Auditor of Department, Olympia, Washington.
F. Dora Criddle, Stenographer, Olympia, Washington.
Marjorie Holcomb, Stenographer, Olympia, Washington.
Muriel Newcomb, Stenographer, Olympia, Washington.

THE THIRD BIENNIAL REPORT OF THE DEPARTMENT OF AGRICULTURE OF THE STATE OF WASHINGTON.

On April 2, 1917, the undersigned was appointed to the position of Commissioner of Agriculture, succeeding Dr. H. T. Graves, former chief of the dairy and livestock division and acting commissioner of the Department. On April 3rd the following proclamation was issued by Governor Lister:

STATE OF WASHINGTON, EXECUTIVE DEPARTMENT.

A Proclamation by the Governor:

"A national crisis places upon every citizen the patriotic duty of immediately helping to sustain the United States in the action resulting from interference with our established rights and liberties.

"Equally important with the need for arms and equipment is an adequate supply of food for our nation and the countries whose people and institutions have been attacked by an autocratic government ignoring the rights of humanity.

"Proper preparedness means that energetic attention must at once be given to producing as much as possible from the land, in both the country and the city. The people of this prosperous state have the opportunity today of making a great contribution to the resources that will strengthen the nation—by each man, woman and child undertaking in an intelligent way to increase the yield of food products.

"The man on the farm can be a leader in this patriotic service, but there is hardly a person in any community without the chance to grow something for family use or the market. With the certain knowledge that all citizens will be quick to act for the good of the country, and because organized effort is essential for full service to the nation,

"Now, therefore, I, Ernest Lister, Governor of Washington, by virtue of the authority vested in me by law, do hereby call on the people of the state to co-operate in a great, agricultural preparedness campaign, and direct immediate action to be taken as follows:

"That the county auditor in each county in the state forthwith call to a meeting the county treasurer, county clerk, county agriculturist, county superintendent of schools, the chairman or a representative of the board of county commissioners, an officer from each bank at the county seat, and such other citizens as he may deem advisable, to organize by the election of a chairman and secretary, and the appointment of proper committees, for the purpose of bringing about the fullest possible food production in every part of that county.

"That the local committee in each school district of the state make arrangements for a patriotic rally to be held on Saturday, April 14th, for the purpose of planning action that will be of the most benefit to the nation from encouraging agricultural preparedness.

"That the state granges, farmers' unions, commercial clubs and all other organizations qualified to act and inspired with a patriotic purpose, be invited to join in this service.

"That the State Department of Agriculture, the state educational institutions and schools, and especially those that are serving the agricultural needs of the state, actively support this movement.

"That steps be taken by the active committees throughout the state to devise ways and means for helping anyone willing to cultivate land if assisted in securing seed, a plan suggested being for the person assisted in this way to pay at harvest time the cost of the seed or to return from the crop at least twice the amount of the seed. Or, any other plan which may seem to better suit local conditions may be adopted.

"The State of Washington is rich in resources and I appeal to all citizens of this commonwealth to take an active part in this patriotic movement that will prepare us to meet any demands that may come."

(Signed) ERNEST LISTER,

Governor of Washington.

On April 19th a mass meeting was held at Seattle, at which meeting representatives of nineteen counties of this state were present, and resolutions were adopted investing the Commissioner of Agriculture with the duty and responsibility of taking charge of the campaign of food production and conservation in this state. President E. O. Holland of the State College assigned Mr. R. B. Coglon, the county agent leader, to assist in this work.

The season for planting many crops, especially wheat, was far advanced; it was generally conceded that the best possible service to be rendered in the direction of food production and conservation was through the public press. Many newspaper interviews and public addresses were given; seventeen specially prepared articles containing between five and six hundred words each were mailed to every newspaper publication in the state during this publicity campaign. A most generous co-operation of the press and of the commercial clubs, the members of the agricultural advisory committee, state, county, and school officials and public-spirited citizens generally, resulted in prompt and active efforts of the people of this state in speeding up the food production to an extent that was hardly anticipated at the beginning of the campaign. During the season of 1917 this was the predominant work of this Department.

The effect of this campaign and the willingness of the general public to act was strikingly noticeable in the thousands of kitchen gardens on town lots, vacant and hitherto unused. The Federal Crop Estimates Bureau calculated that more than 4,000 acres of such gardens were grown. The effect was very noticeable on the fall market of an unusually large potato crop in the year 1917.

Some of these war gardens will cease at the end of the war, but very many will continue. The thrift habit once formed is likely to last. The pleasure of the outdoor occupation and the education of the young people in agriculture, dignify the town lot garden and make it a fixture that will stay.

The National Council of Defense, the State Council of Defense, the Federal Food Administration and federal food administrators in the various states were organized during the summer of 1917. Congress appropriated large sums of money to be spent by the Federal Department of Agriculture directly and in co-operation with the state colleges to increase the agricultural productive-

ness of the country and to aid in food and feed conservation. This particular war work during the season of 1918 was therefore carried on by these other agencies, and this Department was able to devote its entire efforts to its regular work except that it has at all times endeavored to assist in the stimulation of agricultural activities.

APPROPRIATIONS.

Following are the appropriations for the Department made by the last legislature, and which became available April 1, 1917, the beginning of the fiscal biennium:

Department of Agriculture.

Salaries and wages:

Commissioner	\$ 8,000 00
Chief, livestock division.....	4,800 00
Chief, horticultural division.....	3,600 00
Chief, foods, feeds, fertilizers, drugs and oils division.....	3,600 00
Clerks and stenographers.....	9,300 00
Supplies, material and service.....	15,200 00

Capitol outlays:

Office furniture and equipment.....	800 00
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Dairy and Livestock Division.

Salary five dairy inspectors.....	\$15,000 00
Salaries, material and service of dairy inspectors.....	10,500 00
Salary three veterinary inspectors.....	9,000 00
Wages, supplies, material and service per diem inspectors.....	3,000 00
Supplies, material and service of veterinary inspectors.....	8,000 00
For the destruction of predatory animals to be expended by the agricultural department in conjunction with the U. S. department of agriculture.....	15,000 00
Compensation for slaughter of inspected bovine animals.....	50,000 00

Horticultural Division.

Salary ten inspectors.....	\$30,000 00
Supplies, material and service.....	15,000 00

Foods, Feeds, Fertilizers, Drugs and Oils Division.

Salaries and wages.....	\$22,200 00
Supplies, material and service.....	11,800 00

\$234,800 00

Washington State Fair.

Salaries and wages.....	\$ 9,120 00
Operation and maintenance.....	28,880 00
Capitol outlays:	
Construction of new grandstand.....	20,000 00

58,000 00

State College of Washington.

For the extermination of coulee crickets, to be spent under the direction of the department of agriculture.....	2,000 00
	\$294,800 00

It was not foreseen that this country would almost immediately be plunged into war and that the operating costs of the Department would be greatly increased. It has therefore been necessary to make many adjustments and retrenchments that were not contemplated at the time the legislature was in session. The salaries being paid to many employees of this Department

are much below the present rates of compensation which those same employees might readily secure by accepting employment from private firms or corporations. Some of the most valuable experts in this Department have been taken by the federal government at greatly increased compensation. We feel that the continued service for the state by employees who could secure much better salaries elsewhere entitles them to commendation, and it is to be hoped that their services will be appreciated by the legislature to the extent that such reasonable increase may be granted them as to retain their services for the state and thus enable this Department to maintain the high record of efficiency which we believe is accorded to it by the general public and by all with whom we have had business relations.

Statement of fees collected during the biennium, July 1, 1916, to June 30, 1918.

Dairy and livestock division:

Milkmen's licenses.....	\$ 4,206 15
Butter brands	16 50
Stallions and Jacks licenses.....	1,446 40
Registration of marks on dairy cans and tubs.....	100 00
*Predatory animal skins.....	4,443 27
Railroad fare refunded.....	16 33

\$10,228 65

Horticultural division:

Nursery licenses.....	1,675 00
Agents' licenses.....	\$ 242 10
Inspection and disinfection.....	385 49
Inspectors' expense refunded.....	6 60

2,303 19

Foods, feeds, fertilizers, drugs, oils and bakery inspection division:

Oil inspection.....	\$54,827 67
Fees or labels for compound feeds.....	1,494 00
Fines	175 00

56,496 67

Seed division:

Seed inspection.....	39 75
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Total\$69,074 26

***Total amount received from:**

Sales of skins.....	\$5,465 59
Received prior to June 30, 1918.....	4,443 27
Received subsequent to June 30, 1918.....	1,022 32

DAIRY AND LIVESTOCK.

Attention is called to the progress made in reducing disease conditions of the dairy herds through the enforcement of the tuberculin test, so far as it has been allowed by the laws of the state and so far as means have been provided to put these laws into effect. Fifty thousand dollars was appropriated for indemnity to owners of slaughtered animals. More than half of this amount will be turned back to the state treasury unused, the reason being that not enough help was provided to cover the field. The increased expenses of the agents in the field—especially the traveling expenses, living expenses, automobile upkeep, etc.—have made it necessary to reduce the force from three veterinarians to two after October 1, 1918. The purchase of tuberculin and ear tags alone amounted to about \$1,500, which was taken from the expense fund. If that money could have been taken from the \$50,000 fund, it would have left sufficient money in the expense fund to have carried these three men

through to April 1, 1919, but as the appropriation was made specifically to pay for slaughtered animals, it could not be used for this purpose.

It is urgently recommended that provision be made for six veterinarians on this force instead of three, as heretofore. Our recommendation would be to divide the state into five veterinary districts; these doctors working from a home base would be less expensive to the state than heretofore, because they would have no expense account when in their home towns. The idea of having the sixth man is to use him where most needed and in special emergencies.

The advantage of having men assigned to definite districts is, that they will be in closer touch with livestock sanitary conditions, and better able to prevent the introduction and spread of such diseases as sheep scab, hog cholera, glanders, and any other contagious or infectious animal disease that might be introduced in any portion of the state. They could also assist in the enforcement of stallion registration and licenses.

Federal Co-operation in Tuberculosis Eradication.

Under co-operative agreement with the United States Bureau of Animal Industry, several of the pure-bred herd owners of this state have taken advantage of the government offer to inspect their cattle, and when they are found worthy to place them on the accredited herd list of the United States department. This is especially advantageous to herd owners whose stock is likely to be shipped interstate. Recent federal legislation provides for a greater degree of co-operation than has heretofore been possible, whereby the government will co-operate with all states whose laws and appropriations will permit. Under this law the federal funds will be available to pay for one-third of the difference between the appraised value of animals destroyed as reactors and the salvage realized from the sale of the carcass, the sum not to exceed \$25 for grades and \$50 for purebreds. This is providing, however, that the federal government will pay no more than the state in any case. Resolutions from state granges and other agricultural institutions in this state have urged that a higher rate for compensation be fixed. If it is public policy and good business to pay any part of the losses for destroyed animals, it would seem to be only fair that a larger price should be set than \$35, the maximum price heretofore allowed under our law for either grades or purebreds.

It is vitally necessary in the interest of eliminating the livestock disease of tuberculosis among cattle and in the interest of producing a healthful and cleanly milk supply especially for the babies of this state that this Department should have authority to make tuberculin tests of livestock whether the owners desire such tests to be made or not. It is necessary that the sale of tuberculin should be so regulated as to give this Department the absolute control of its use within the state. This can only be done by making it a criminal offense for any person to sell or use tuberculin in this state except upon license or authority of this Department. Abundant evidence in justification of such a law is contained in the records of the Department.

Tuberculosis eradication work could be more systematically carried on and a closer co-operation maintained with county agents in the various counties if five inspection districts shall be established instead of the roving commission of three men as heretofore practiced.

Predatory Animals.

Of the \$15,000 appropriated for co-operation with the United States Bureau of Biological Survey in the campaign against predatory animals in the State of Washington, \$8,173.95 was expended between the time the appropriation became available, April 1, 1917, and July 1, 1918. This appropriation was made with the understanding that the federal government would spend an equal sum of money in this state and would also provide supervising officers and take care of all the office and other overhead expense. As a matter of fact, federal funds to the amount of \$15,249.18 were used to pay the salaries of trappers employed in this state during this period, and 2,151 predatory animals were killed by them.

Of the state funds expended, all except \$6.15 was in payment of trapper salaries, the \$6.15 being used to pay for the burlap used in shipping the furs of the animals killed.

A total of 915 animals were destroyed by trappers paid from state funds. Of this number, 770 were coyotes, 9 were bob-cats, 3 were Canadian lynxes, 1 a cross-fox, 1 an otter, 22 skunks, and 109 badgers.

The furs of these animals became the property of the state and were sold for \$5,426.26. This sum of money, which is 67 per cent of the total amount of state funds expended, has been turned back into the state treasury, leaving a net cost to the state of Washington of \$2,746.69.

The value of this work to the livestock interests of the state is many times greater than the cost. The United States Forest Service estimates that each coyote will in the course of a year destroy livestock to the value of \$50. Many letters from stockmen in various sections of the state all testify in the highest terms to the good accomplished by the men employed in the campaign. One sheep man in the Yakima valley says that one state trapper who worked on his range during lambing season saved him \$3,000, which is more than the total net cost to the state of the entire 15 months' work. He arrived at this estimate by comparing the losses sustained in 1917 with those of 1918.

Obviously, this kind of co-operation, showing such unusually favorable results to the state, would justify an increased appropriation. A \$20,000 appropriation for the next biennium would not only permit of some expansion of this profitable work, providing the government saw fit to match the amount, but it would be a very positive expression of approval by this state of the very efficient manner in which these federal and state funds have been expended by Mr. E. F. Averill, the Predatory Animal Inspector for the states of Washington and Oregon. It is hoped this cooperative work may be further extended to include rats, rabbits, ground squirrels, gophers, moles, predatory hawks, and other pests.

Rabies.

This dread disease has prevailed in all the counties of eastern Washington during a portion of this biennium and in some of the counties during all the time. Three persons have died of hydrophobia, having been bitten by diseased dogs. Sixty persons have been given the Pasteur treatment by the State Health Commissioner, Dr. T. D. Tuttle, in Seattle, these having been exposed by bites of rabid dogs, cats or coyotes.

The general dog-muzzling quarantine covering all counties east of the Cascade Mountains was raised in August, 1917, because of its non-observance.



FROM NEW ZEALAND TO YAKIMA
Imported 1918.

Romney sheep on irrigated pasture, September (N. Z. springtime) lambs.

A few months later, owing to outbreaks of rabies, and the agreement of citizens and public officials that some attention in the way of law enforcement would be paid to the order, it was again established in the counties of Kittitas, Yakima, Benton and Franklin, and is now effective in these counties.

The reason why the law is not usually enforced is because the local peace officers dislike to incur the enmity of their neighbors and friends by shooting their dogs. It would seem highly desirable to create a state officer whose duty, among other things, would be to enforce this law whenever the public need makes it desirable so to do. One good effect has resulted from the dog-muzzling quarantine order. It has given people a chance to clean up a lot of worthless curs, with or without owners, and thus has helped in the food and feed conservation as a war measure, and the economic result has been noticeable in many communities.

Sheep or Dogs.

The war needs for wool and the appeals of the Government for greater production have started a campaign for increasing the sheep in every part of this nation.

Between 1910 and 1917 the number of sheep in the United States decreased five million head, while the population of the country increased ten million during that period.

The following quotation is from a statement recently made by Lewis Penwell, Chief of the Wool Division of the War Industries Board:

"All available wool is now taken by the government for the army and navy needs, and none is allowed for use in the manufactures for civilian purposes. Seven hundred million pounds will be required for this year's needs of the military forces, and the production of the United States is only 280 million pounds. All of this in the face of a normal consumption here of 650 million pounds yearly. Limited shipping facilities and priorities of other materials essential to winning the war make other importations of wool difficult.

"Decreased production of wool, particularly in the western part of the United States, is distinctly noticeable, but the output can be greatly increased if every farmer were to raise sheep just as he keeps poultry and hogs. Every encouragement should be put forth to induce the production of wool."

This statement was made while we were at war.

The one greatest menace to the success of the industry, especially on the small farms, is the sheep killing dog. Farmer's bulletin 935 on this subject is good. It summarizes as follows: "The dog not only kills sheep but keeps out of the sheep business men who are otherwise inclined to go into it."

"The most effective method of dealing with the sheep killing dog is through efficient legislation."

"Notable progress has been made by several states in enacting good dog laws, and others are expected to take similar action."

"Uniform state dog laws are desirable."

No livestock can be used as profitably and successfully in the burned and seeded logged-off lands of Western Washington as sheep. If the question is between the controlling of dogs and the existence of sheep, the answer should not be difficult.

Bulletins and various publications regarding sheep and other livestock have been freely distributed by this department, and inquiry of stock growers, especially beginners, is always welcome.

HORTICULTURE.

The Division of Horticulture, with the state divided into ten districts and with the counties co-operating by employing county horticultural inspectors in proportion to the horticultural resources of each county, is believed to be generally satisfactory and efficient. Certain portions of the year the work of our ten district inspectors is almost entirely regulatory or police work in maintaining the fruit standards and in protecting the market against misbranding, and against the packing of fruit below standard, and in preventing the introduction of pests. During other portions of the year these inspectors necessarily are called upon to do educational work in their respective fields in order to show the growers the methods by which clean and high grade merchantable fruit can be produced.

POTATOES.

The action of our inspectors in reference to the shipment of potatoes from California containing the tuber moth has unquestionably prevented the introduction of that dreaded potato pest up to date, in this state. We have found it necessary to enforce most rigidly the quarantine regulations vested in this department by our horticultural law, and have been obliged to return to California several carload shipments of potatoes thus infested.

IRRIGATION EXPERIMENT STATION.

It is not our function to engage in research work, but it has been necessary in the Yakima Valley because of the critical condition of the fruit industry and the lack of funds of the State College to carry on some necessary investigation. This work has been done at the request of fruit growers, farmers and county commissioners, and the expense has been borne almost entirely by Yakima County. The last legislature provided for the selection and acquiring by the State College of a site for an irrigation experiment station. Although no funds were appropriated to make the purchase, a site has been secured at no cost to the state which is easily worth, according to values of similar lands in the vicinity, not less than \$10,000. If this donation is taken advantage of by the state, and an experiment station established, there will be no further need for such research work as that heretofore practiced by this department in Yakima County. Unquestionably the institution to render this public service, is the experiment station under the direction of the State College. Irrigated agriculture in the State of Washington at this time represents practically all the wealth of the counties of Yakima, Kittitas, Benton, Chelan, much of Okanogan, and large interests in many other portions of the state. Great as the irrigated wealth of the state now is, the prospects are that in the near future its importance will be enormously increased. The present and future problems incident to this feature of our state's agriculture, make this line of research and investigation one of the most attractive lines of work that can be undertaken. It includes not only the horticultural and agricultural crops grown in the irrigated sections, but also every branch of livestock production.

Coulee Crickets.

The cricket devastation in a small section of Grant County has for several years past been a very serious problem. The earliest cricket infestation of



CHARACTERISTIC YOUNG APPLE ORCHARD IN WASHINGTON.

In 1917 this state produced 4,176,000 barrels of commercial apples, being 300,000 barrels more than the combined production of the two next highest states that year (New York and Virginia). At an estimated average valuation of \$3.75 a barrel (or \$1.25 per box) the crop meant \$15,660,000. It was 19% of the total commercial crop of the United States and 54% of the boxed apple crop. (See official report of the U. S. Bureau of Markets; Division of Crop Estimates.)

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which any evidence is available is an outbreak which occurred in the late seventies in the Columbia River Canyon on the west side near Lake Chelan. Indians and white men vouch for this report.

In 1873 an outbreak of crickets, supposed to be the same species as the coulee cricket, occurred near Dayton, Wn. Other outbreaks in Moses Coulee and Grand Coulee occurred from 1892 to 1902. At Ephrata in Grant County a serious epidemic of crickets happened in 1900. They had been increasing in numbers during the two or three years previous, starting from the coulee a few miles north of Moses Lake. In 1903 the most disastrous cricket devastation the state has ever known began when the cricket armies swept up from Moses Coulee and devastated many sections of wheat on the south side of Badger Mountain. The following year—1904—the armies had increased to such an extent that they overran many hundred square miles of that part of Douglas County. This was the first year that any organized resistance was made. Approximately fifty miles of cricket fence was built with ditches and board fences, in a desperate effort to prevent the plague from sweeping the entire country. Fortunately for the country, an unseasonable freeze in the spring of 1905 following an early spring, apparently cleaned up the last vestige of this particular outbreak.

For six or eight years prior to 1916 these crickets were multiplying in the Cold Spring Canyon and Dry Coulee, both lying north of the Great Northern Railway at Stratford and Adrian. In 1916 the development was so great as to become a menace to the entire district and possibly to all of Eastern Washington. During this year the people of Grant County, under the leadership of County Agent H. W. Reaugh, adopted vigorous measures in attempting to hold or exterminate the pest. During 1916 the area covered by crickets amounted to 102 square miles lying between Hartline and Adrian. The principal method of combat pursued during both 1916 and 1917 was the construction of ditches by plowing and shoveling and digging post holes in the ditches a rod apart as traps, and the construction of many miles of board fence eight or ten inches high with a metal strip on top, this method having been borrowed from the Badger Mountain fight of 1904.

Various devices were resorted to in this conflict. Four hundred hogs were brought into the district and herded on these crickets, destroying thousands of them, but incidentally making the hogs sick. Turkeys and chickens were also experimented with, but the construction of the cricket is such that neither hogs, chickens, nor turkeys can feed on them to advantage until after the crickets have been burned or singed. In that condition they make very desirable stock feed for poultry and probably for hogs. During 1917, with all the work that could be done by Grant County, and even with the aid of a large portion of the \$2,000 appropriated by the previous legislature for the purpose, the infested area was increased from 102 to 110 square miles. During the year 1917 among other devices for combating this pest probably none was more efficient than the liquid fire or gasoline torch that was used in destroying them along the fence lines and in the post holes or wherever else they were congregated in thick masses. Large amounts of poison were used. During the first two weeks of the cricket's life this was found to be very effective, but owing to the great area infested, was impracticable to apply.

The Federal Food Production Act of August 10, 1917, provided for the loaning by the federal government of trained entomologists to the various agricultural extension divisions for the purpose of assisting in the extermination of all insect pests detrimental to food production. Mr. Alfred C. Burrill was loaned to this state by the United States Bureau of Entomology, arriving in Grant County early in April. The crickets had already hatched, and it was too late to use poison effectively. Under Mr. Burrill's direction, all available help in the community was employed chiefly in building cricket fences and using torches. During the two months of April and May a hundred people were used, averaging a force of sixteen persons continuously for sixty days. During this time six distinct armies of crickets were encountered, moving as persistently in their different directions as an army of soldiers. These were all successfully conquered. It is reported that one army made six successive charges against different portions of a four-mile defense line. The devastation this year was confined to an area not exceeding ten square miles of pasture land and only one square rod of wheat was destroyed. A ninety-acre field of barley was partially damaged. In previous years several thousand acres of wheat had been destroyed in this cricket infested area, besides orchards, gardens, and pasture lands. This year twenty-four potato sacks were filled with the burned or singed bodies of crickets and taken home by different workers and fed to their poultry. These sacks were estimated to contain over one million crickets, and they did not represent half the number that were believed to have been killed.

While this pest has been visited upon Grant County, every district in Eastern Washington is jeopardized until the pest is exterminated. It is estimated that \$1,000 will be sufficient to care for this work another year, providing the federal government will furnish the assistant as in the past season and stand his expenses, which would make the Government's contribution amount to from five to seven hundred dollars. Unless some general insect pest control measure is adopted it is recommended that an appropriation of \$2,000 be made for this purpose because this menace affects all the farming districts of Eastern Washington, and it is not fair to throw the burden of exterminating this pest upon Grant County, which has heretofore expended in labor and cash not less than \$30,000.

Alfalfa Weevil.

There are approximately 150,000 acres of alfalfa in the State of Washington, more than 100,000 acres being in the Yakima Valley. Allowing an average of five tons per acre, this crop would be 750,000 tons. It is the most valuable forage plant grown in the state. One important authority says: "The cultivation and feeding of alfalfa marks the highest development of modern agriculture. It is the preserver and the conservator of the homestead; it is one of the choicest gifts to man." It would be impossible to estimate the value of the present and prospective alfalfa crop of this 150,000 acres to the agriculture of the State of Washington, and within the next few years we may expect to see the area more than doubled in this state.

In recent years the price has ranged from \$8 to \$15 a ton in the stack. This year it has been \$20 a ton. At that rate this year's crop is worth \$15,000,000. To eliminate this wonderful crop or a large portion of it from the farms of Washington would surely be a catastrophe. This crop is now

jeopardized by the possible introduction of the alfalfa weevil from the infested sections of Utah, Southern Idaho, and parts of Wyoming.

The weevil destroys the first annual cutting and greatly reduces the tonnage of the second cutting. Its first appearance in America was near Salt Lake City, Utah, in 1904. It has gradually enlarged its sphere of devastation until in 1917 it included fifteen counties in Utah, six counties in Idaho, and two counties in Wyoming.

There are portions of our state which lie in the direct avenue of commercial relations with these infested sections. Potatoes from Southern Idaho are being brought into our state every year. There are recent reports of the weevil being found in potato shipments destined for California. Six years ago they were found in carloads of Utah potatoes in the city of Butte, Mont., which fact prompted that state to issue a drastic quarantine, regulating the shipments of all Utah products into that state. California has done likewise. We are now shipping thousands of tons of alfalfa hay into this state from Idaho, and if we escape the introduction of the weevil this year, it will be little short of a miracle; yet there is no law that authorizes this department to restrict, regulate, or quarantine against such a possible calamity.

OTHER INSECT PESTS.

Losses to farm crops in the State of Washington from other insect pests amount to many millions of dollars each year. Much of this could be prevented with comparatively little expense if the control measures which have proved to be reasonably efficient and satisfactory could be applied. The barley loss from aphids during the past season is estimated at over two million bushels—approximately three million dollars. In some districts the first crop of alfalfa was a total loss as a result of aphids, and in many districts the crop was greatly reduced.

Grasshoppers.

The grasshopper devastation in the Okanogan Valley for the past three years has gone practically unchecked, and the menace is on the increase. The Government entomologist in the field, after surveying the district where the eggs had been deposited this year, estimated that seven billion eggs had been deposited, which will make the pest next year vastly worse than it was during the past season. It has been increasing since the pest struck the Okanogan Valley three or four years ago. A few hundred dollars properly expended would have destroyed this particular pest. This year the wheat losses between the towns of Molson and Chesaw amounted to twenty-five thousand bushels. This, with garden and pasture losses, amounted to over eighty thousand dollars.

Entomologists have calculated that twenty-seven grasshoppers per square yard will eat any grain or grass crop faster than it will grow; that sixteen to the square yard will eat a ton of alfalfa a day on forty acres. If the eggs now deposited in the Molson-Chesaw district all hatch, they will be able to eat 2,300 tons of wheat, alfalfa, and grass per day during from sixty to one hundred and twenty days next year.

One farmer in this district the past season spread a pound of paris green in a bait mixture which cost \$1.76 total, and killed within one day six hundred thousand grasshoppers, which would have consumed within the next

month at least four tons of his wheat and laid from five to twenty million more eggs for next year. It will probably cost \$2,000 to fight the grasshopper pest next year in this one district. Grasshoppers in epidemic quantities have been reported from other districts in this state, but no definite information regarding them was secured.

Aphis.

The California Horticultural Commissioner collected in one year eleven tons of ladybugs, using sixteen men for about six months in the work. These were distributed throughout the state to growers of melons, beans, and other crops subject to aphis loss. They are found at certain seasons in the mountains of the Pacific Coast states in large quantities, and if properly cared for and distributed where needed, at the proper time, they constitute a great protection against the aphis pest at a very small cost. It takes twenty-two thousand ladybugs to make a pound. When some of their mountain congregating places are discovered, hundreds of pounds can be secured in a few hours.

Authority Needed.

The last legislature appropriated two thousand dollars to be paid out by this department for coulee cricket control, but unfortunately the act did not provide the necessary police power to make the expenditure efficient. If the Commissioner of Agriculture and his deputies can be clothed with authority to quarantine the infested areas and deputize and employ local citizens and equipment when such action becomes necessary to avert serious disaster, the legislative appropriation would be of vastly more value.

The alfalfa weevil heretofore mentioned is one of the scourges that may cost this state millions of dollars. We know its constant progress in the past fourteen years in Utah and other neighboring states. We know it is liable to be brought into this state even with our best preventive efforts, and more likely while we are now doing little or nothing to prevent its introduction. Our recommendation is that an appropriation be made of fifteen thousand dollars, or so much thereof as may be needed to combat insect pests on cereals, forage, fruit, and other crops, all expenditures to be made under the direction of the United States Bureau of Entomology, or other federal bureaus, working in this state in co-operation with the State College extension division.

Report Strange Bugs.

It is important that any new or unusual bugs or insect pests should be immediately reported either to the State College at Pullman or to the State Department of Agriculture at Olympia. Such a report might save great loss to the state.

SEED SECTION.

Attention is especially called to the report of the seed analyst. The war campaign during the past two years against waste and in favor of increased production of food crops has emphasized the importance of securing better seed and eliminating the waste incident to scattering noxious weeds in commercial seeds. Since the organization of this department, there has been one person employed as seed analyst who, in addition to the duties of making seed tests for purity and germination, has also examined the seed stocks in

the principal business centers of the state not less than twice a year—sometimes oftener, and when violations of the law have been discovered, prosecutions have been made. Necessarily, one person traveling by train could not possibly cover the entire state with any degree of satisfaction, and more especially if that person was also required to do the laboratory work of testing and examining seed samples. The very great importance of this work requires one expert seedsman equipped with an automobile to travel through the state during all the periods of the year, when roads and weather conditions permit, visiting the small towns as well as the larger cities, for it is here that poor grades of seed are more likely to be offered for sale, and also examining fields where seed is being produced for commercial purposes. This expert can co-operate with horticultural inspectors and the county agents and the State Bureau of Farm Markets, and would be of great service to all. In addition, a seed analyst should be employed in the office to test such samples as may be sent in by farmers and seed dealers.

If it is not deemed advisable to appropriate sufficient funds to make the seed section of the State Department of Agriculture reasonably efficient and worth while, then our recommendation would be to cut out entirely that portion of our appropriation and turn over the work of analyzing and testing seeds to the State College and the State University the same as we now use the chemists of those institutions for our work.

THE FOURTH DIVISION.

Foods, Feeds, Fertilizers, Drugs, Oils and Bakery Inspection.

Examination of the report by the chief of this division will clearly indicate the value of these activities to the public health and welfare. No more important or responsible duty rests with any group of state employees than this. The public seldom realizes what protection it is getting from their services. A perusal of this report should be of general interest.

The legislation now deemed most important for this division is a law to provide a better method for enforcing the standards of stock feeds. It is not in accordance with present day practices to allow any person to grind up a combination of comparatively worthless ingredients and sell the same under a trade name without any labeling to indicate its food value. The poultry, dairy, and hog-raising industries of the state are largely dependent upon these feed manufacturers. It is only fair to say that many of the leading firms are as anxious as we are to have a definite law on this subject, because it will give them protection against the unscrupulous dealer and will enable them to buy and sell on market values, and conduct a legitimate business, alike to themselves and to the consumers.

THE STATE FAIR.

The object of all fairs is to educate and enthuse the public along agricultural lines.

"The fair stands as a unique educational force in agriculture, teaching by object lessons, and as a whole, it makes people think. A community in which a good fair is located will produce more at less expense; the same is true of the State Fair." (Report of the Kansas State Board of Agriculture.)

The Washington State Fair was organized by the legislature in 1893. In reaching its quarter of a century mark, it can claim under all the rules by which state fairs are judged that the 1917 and 1918 fairs were, each in turn, the most successful in its history. The development of the state agriculturally, the improvement of the roads by which Yakima is readily accessible during the month of September to every part of the state by automobile, the prosperity of farmers and livestock growers, the interest taken in the fair by the State College through its extension service whereby ninety-five students representing twenty-six counties of the state participated in the last fair—these things, together with the improved equipment, have contributed largely to the present success of the State Fair. The success attained is only the beginning of a much greater value, that hereafter may be expected. More counties represented, better premiums and larger exhibits of livestock and a larger representation of industries and manufactures, especially of farm tools and machinery, may be confidently looked for. The Washington State Fair sheep sale, by public auction conducted at the last two fairs, was the means of distributing \$30,000 worth of high grade and pure bred sheep among the flocks of this state each year. A sale of dairy cattle might be staged on similar lines and would be of much benefit to the dairy interests as well as to the producers of good dairy stock.

The State Fair plant—the grounds and the buildings—is being constantly improved with the earnings and legislative appropriations for this institution. With the present rate of progress and with the construction of necessary buildings, the State Fair in a few years should be a self-supporting institution with a constantly increasing value to the agricultural development of the entire state. Attention is directed to the full report of the Secretary published herewith.

EMERGENCY APPROPRIATION.

If some fund could be available whereby the State Board of Finance (or some other authority) could, upon a proper showing being made, come to the relief of an unforeseen situation, the business of the state could be conducted with greatly reduced appropriations for contingencies. Unless this plan is adopted, the estimated budget for the Department of Agriculture should be increased \$38,000 above the sum specified as being necessary to run the department for two years. The Agricultural Advisory Board deems it unwise to ask for certain fixed sums, because it is impossible to determine in advance the amount to be needed.

In 1914 an outbreak of foot and mouth disease in this state was fortunately averted. It easily might get started and require thousands of dollars to stamp it out. In the summer of 1918, sheep scab was discovered in the summer range in Okanogan County. Over 60,000 head were quarantined and dipped. The sheep industry is too important to the state's welfare to allow such a disease to exist. It must be eradicated, and quickly. It may require several thousand dollars to inspect, quarantine, and supervise the dipping of possibly every sheep in the state before the disease is controlled. This is not likely. We hope it has been stamped out already. But there is a menace and a real danger to the general welfare.

We have had several outbreaks of glanders among horses—a disease also communicable to man. We can never be sure that a most serious outbreak may not occur at any time.

An infestation of alfalfa weevil might be checked if handled immediately, providing funds were available and quarantine laws were adequate; but if no such funds were to be had, the resulting damage to this state would amount to millions of dollars and become a scourge to the alfalfa industry that could not be overcome.

Many other serious things may happen. It is certainly more business-like to have a discretionary power resting with a board consisting of the Governor, the Auditor, and the Treasurer than to make numerous appropriations for specific contingencies, none of which may arise to require any funds during the biennium.

The second year of the State Fair in the biennium is always a gamble on the weather. Fortunately, the weather at that season is usually good, but it is not fair to expect any official to assume the responsibility of insuring good weather for the state by being individually liable for any deficiency that may result from bad weather, besides being criminally liable and subject to a fine of \$1,000. (See Rem., sec. 5026.)

The only alternative is to keep an idle guaranty fund of approximately \$15,000, that may not be used once in ten years, to protect the Commissioner of Agriculture against the contingency of a few days of bad weather during one State Fair week in two years.

LAND SETTLEMENT.

On June 20, 1918, there was held in Seattle under the auspices of the Seattle Chamber of Commerce, and at the special instigation of the Washington Irrigation Institute, a meeting for the purpose of organizing a State Land Settlement Association to consider such activities by other states and by foreign countries, and to draft such legislation for submission to our state legislature as seemed to fit our condition. The chief object of the convention was to help in the making of successful farm homes, and in the reclamation of waste and unused land, primarily in the interest of returned soldiers and sailors who may desire such opportunities, but also for industrial war workers and other worthy persons.

The notable letter of Secretary of the Interior Franklin K. Lane to President Wilson dated May 31 had just been issued, and was accepted as the basis for the efforts of the Washington association. Your Commissioner of Agriculture was elected president of the organization, and in view of the very great agricultural importance of any such movement and with the approval of the Agricultural Advisory Board, has deemed it of sufficient importance to the state to have given considerable time to this work. The executive committee of this association consists of very representative citizens of the state, and it is hoped that such legislation may be enacted by this state as will enable us to participate on a co-operative basis with the federal government in the reclamation, improvement and settlement of the unused lands of this state, whether arid, overflowed and swamp lands, or logged-off lands.

Respectfully submitted,

E. F. BENSON,
Commissioner of Agriculture.

DAIRY AND LIVESTOCK DIVISION.

Hon. E. F. Benson,
Commissioner of Agriculture,
Olympia, Wn.

Sir: For your consideration there is submitted herewith a report of the activities of the Division of Dairy and Livestock for the biennial period ending July 1, 1918. In some cases additional data is appended, bringing the report to November 1, 1918.

The Division of Dairy and Livestock makes investigations as to the existence of infectious and contagious animal diseases, supervising the methods of eradicating the same; makes investigations as to the origin, nature and prevention of such diseases; co-operates with the United States Bureau of Animal Industry, State Board of Health, State College, Experiment Stations, Bureau of Markets and County Agents; investigates the condition and methods of improving the animal industry of the state. It has charge of the inspection of interstate shipments of livestock, the establishment of quarantines for the safeguarding of the livestock industry against disease, and through the power conferred on the Commissioner of Agriculture may slaughter diseased animals whenever the same may be necessary.

This division obtains and disseminates information relative to livestock and dairy production, collects licenses from retail milk venders and stores which retail milk.

The division maintains a corps of dairy and creamery inspectors whose duty is to inspect dairies, creameries, cheese factories, condenseries, milk plants and all places where dairy products are produced, manufactured and sold; to instruct in better methods of production and manufacture, and to recommend improvements when found necessary. Milk and cream testing is done. Milk cans are inspected and condemned when found unfit, or ordered returned to owner when being used unlawfully. Samples of milk, for chemical analysis, are taken from wagons delivering to consumers in towns and cities.

DAIRYING.

The dairy cow stands above all other farm animals in the agricultural development of this state. It is true that other farm animals have played an important part, but the cow has continued to feed the settler, and through the always ready marketable butter, milk, cream or cheese has been a source of revenue to the homemaker. No other animal produces human food so economically from the forage of the field as she. No other farm animal brings as prompt returns on the money invested as she. In the wheat belt of the state she has been the savior of many families when crops failed, and in the alfalfa-growing sections she has offered the best source of market for that wonderful forage, but in Western Washington she has reigned supreme. In this great grass country she has been the means of clearing the forest land, often providing the sustenance for the family while the land was undergoing clearing.

This has been accomplished most often with cows of mediocre ability, but, due to the better breeding of the dairy animals, the education, organiza-

tion and co-operation of the men engaged in the industry, the standard of the dairy cow in this state is reaching a higher plane, until today we can truthfully boast that many of the record cows of the world are now located in this state. The mild, equable climate, the abundance of water, shade and grass are destined to make this one of the great dairy states of the nation.

The evaporated or condensed milk of the state has now a world-wide market. The quality of Washington butter and cheese is being maintained at a high standard, but much low grade butter is still being produced. It is felt, however, that changes in our present dairy laws will have a tendency to improve the quality of butter and cheese manufactured. Recognizing the need of regulatory measures and the benefits that would accrue from standardization, the following recommendations to meet the requirements are suggested:

All glassware used in connection with the Babcock Test should be standardized. Every person, before being allowed to use the Babcock Test for commercial purposes, should be licensed. Examination should be given by the Commissioner of Agriculture or his assistants.

All milk or cream not used in the manufacture of butter should be considered unwholesome when it contains more than .2 of 1 per cent of acidity and has a temperature above 60 degrees Fahr. when it leaves the farm.

All cream used in the manufacture of butter should be considered unwholesome when it contains more than .5 of 1 per cent of acidity and has bad flavors.

A law compelling the pasteurization of all cream used in the manufacture of butter.

A state laboratory equipped for chemical and bacterial work.

While there is much talk of the dairy cow going to the butcher's block, there is reason to believe that there is no need to view the matter through the eyes of an alarmist. Good dairy cows are not plentiful—never were plentiful—and there are always too many of the other kind. It is a matter of congratulation that they are now in the struggle of "the survival of the fittest" being eliminated.

Dairying is fast becoming a specialized industry and through the recent discoveries of agricultural chemists in which it has been found that milk contains growth-promoting substances which are found in nothing else it is only natural that dairy products will receive the recognition they so richly deserve.

The following dairy inspection report by G. G. Carman is herewith submitted:

Dairy Inspection Report.

"In reviewing the work of dairy inspection in Western Washington during the past two years, it is encouraging to note the marked improvement in the tendency to create better dairy products, both from commercial and sanitary standpoints.

The primary object of this work is the protection of the public health, and the time is spent mainly with the producers of dairy products in an effort to educate and instruct. Experience in the past has shown that greater results may be obtained in this manner than by the use of police power.

Owing to the present abnormal prices of labor, building material and other equipment and supplies, it has been the policy of this department to enforce more and better sanitary methods on the farms with the least possible expense for new equipment. Marked improvement has resulted in the handling of milk and milk products in the sections and dairies visited.

During the years of 1915 and 1916 the work was conducted by inspecting each dairy farm of a county before taking up the work in another county. Each dairy was located and numbered on a county map. It has been found, however, that while this method of inspection was fairly successful, it was impossible to get over each district as often as desired, and during the past two years some change has been made in this program. Owing to the vast amount of territory covered in our work and the small number of inspectors employed, a change was advisable. In the two years just passed, we have especially endeavored to take care of the complaints made and calls for assistance. We have also taken up the work from a different basis by inspecting the products offered at the various manufacturing plants, at railroad stations, and from the retail delivery wagons. In this manner the poor product was detected, and when necessary, condemned and returned to the producer. In every case where the product was found to be of poor quality, the farm producing it has been visited and instruction given as to the better care of milk and cream. This method of working has given good results with a minimum of expense.

The milk supply of the smaller cities has also received considerable attention by this department during the past two years. The larger cities, having their own local inspectors, have been able to take care of their own supply, but in numerous instances have been given help from this department, especially in the work of milk and cream scoring contests.

In the smaller cities and towns the work of inspection has devolved entirely on our inspectors. In these towns practically all milk is consumed in the raw state, and it is extremely important that such milk be as pure as possible.

As the health of the milch cow is a very important factor in the production of pure milk, some time has been spent by the inspectors in assisting veterinarians in the tuberculin testing of cows and in holding demonstrations of the lesions found in condemned animals. In this latter work a demand has been created among consumers for safer milk, and we have been able to have ordinances regulating the production and sale of milk passed in several cities.

The sterilization of milk bottles has been demanded in all places where milk is bottled. This is of prime importance because the milk bottles, being exchanged daily from one house to another, might be exposed to many disease germs and can readily become a great factor in the carrying of disease. In places where a steam boiler is not available, and where only a small number of bottles are used, the following device has been recommended: A galvanized iron tank containing a wire rack about four inches from the bottom, and equipped with a tight cover. The tank is made large enough to hold all bottles used, and may be heated from a brick arch, an oil stove or any other contrivance for heating. In using it a small amount of water is used, and a consequently small amount of fuel is necessary. The water is boiled for twenty minutes or longer. A number of these tanks are in use at the present

time and are giving first-class results. As the cheapness of this sterilizer brings it within reach of all bottlers of milk, there is no excuse for the use of unsterilized bottles.

The bacterial count of milk is a great factor in determining its purity. The larger cities, with their own laboratories, have been able to secure a reduction of the bacterial count, and where these counts have been made regularly, a great improvement in the quality of the milk supply has been noted. At Camp Lewis the milk supply for the soldiers has received careful inspection. The bacterial count has here been made daily at the camp laboratory, and by this means the milk supply has been kept up to a high standard. What is being done for the health of the public in the larger cities, where a large percentage of the milk is pasteurized, and in the federal laboratories for the protection of the soldiers, where all milk is pasteurized, should be much more necessary in the smaller towns where all milk is consumed raw. In order to be able to do this, it will be necessary to have a state laboratory, a place available to the inspector at all times, where he may send samples of milk and get the benefit of the analysis.

The predominating complaint of the farmer and dairyman to this department has been in regard to the low reading of the Babcock Test from the various manufacturing plants. These complaints have been investigated by the securing of samples of milk from the complaining parties, testing and checking against the plant, and also by testing at the plant. In nearly all cases no grounds have been found for these complaints, which have undoubtedly emanated in many instances from the improper mixing of the milk or cream on the farm, the lack of taking into consideration the variations in test during the various lactative periods of the individual animals, and other similar causes.

In addition to the work enumerated above, considerable time has been spent in enforcing the provisions of an act passed by the legislature of 1915, relating to the marks and brands on milk cans, tubs and containers used in the manufacture of ice cream and the transportation of all dairy products.

This has been done by taking the cans whenever found, and where they were being used unlawfully and returning them to the rightful owners.

Owing to the necessity of economizing on many food products, together with the high prices prevailing, educational work has been carried on among the consumers of milk in an effort to impress upon them the high food values of milk and dairy products, and to show them the necessity of paying a fair price for this product. This latter phase of the propaganda has been deemed necessary at this time, when the high price of labor, feed, etc., has in many instances so greatly reduced the profit in keeping dairy cows that many farmers and dairymen have felt disposed to sell many of their animals.

G. G. CARMAN,

Dairy Inspector.

MARKET MILK.

The market milk of our cities has been improved from year to year. This has been accomplished by the demands of the people for a better quality of milk. Many of our municipalities now have health officers who are active in the promotion of this work and it has been a pleasure for this division to

co-operate with them and the Dairy Division of the United States Bureau of Animal Industry.

Following is an article by C. F. Hoyt, Market Milk Specialist of the United States Bureau of Animal Industry:

CITY MILK CONTESTS.

A few years ago the public generally came to recognize the fact that the unaided individual purchaser of milk was in no position to distinguish carefully the good from the bad milk offered for sale and to secure for himself a good supply. To so distinguish good pure milk from poor and dangerous milk requires special equipment and time for investigation. Cities and states came to supply this equipment and to employ men for these investigations. Cities and states went further than this and attempted by force to require all milk on the market to meet certain standards as a minimum. By this means the purchaser of milk was afforded some protection from poor or dangerous milk and the producer of good milk was afforded some protection from his unscrupulous competitor. But within wide limits the purchaser could exercise no intelligent choice between good and poor milk and to the same extent the producer of good milk was subject to competition from the producer of poor milk.

Now two objects are sought through milk inspection—the protection of the consumer from poor and unwholesome milk and the protection of the producer from unfair competition. Some five years ago the health authorities of Seattle came to recognize the principle that there exist many grades in the quality of the milk on the market, grades ranging all the way from pure, rich, wholesome milk to that which is a poor or questionable food. With the co-operation of a representative of the Dairy Division, U. S. Department of Agriculture, they proceeded to ascertain these grades. This was done by regularly taking samples from all the various distributors and examining them chemically and bacteriologically and otherwise. At the end of a fixed period of time the values obtained on all the samples of each distributor were averaged. The results were then translated into numerical values by means of the U. S. Department of Agriculture score card.* The final score was then expressed on the basis of 100, and this score on the milk of the various distributors was published in the various newspapers.

By this procedure the consumers generally are enabled themselves to judge the quality of milk supplied by the various milkmen and to choose that which best meets their needs. By this means also justice is done the producer of good milk by having the quality of his product publicly recognized and he is thus relieved from the competition of the dirty or dishonest milkman.

This plan has been consistently followed in Seattle and has resulted in a notable improvement of the milk supply of that city. It has met with general approval and has been adopted in most of the larger Western cities. In the State of Washington the work has been carried on regularly in co-operation between the city health authorities, the State Department of Agriculture and the U. S. Dairy Division in the cities of Seattle, Spokane and Everett, and at irregular intervals in Tacoma. This plan has given excellent

* See U. S. score card, following page.

results by furnishing the consumer a means of judging the quality of the different milks offered, by relieving the producer from the competition of unscrupulous men and by furnishing a means of locating the cause of any fault in quality. It is confidently believed that smaller communities might adopt the plan with profit to themselves.

C. F. HOYT,
Market Milk Specialist.

UNITED STATES DEPARTMENT OF AGRICULTURE,
Bureau of Animal Industry,
Dairy Division.

SCORE CARD FOR MILK.

Place
Class..... Exhibit No.....

ITEM	Perfect Score	Score Allowed	Remarks
Bacteria	85	.....	Bacteria found per } cubic centimeter }
Flavor and odor.....	25	.....	Cow, Bitter, Feed, } Flat, Strong, }
Visible dirt.....	10	.....	.....
Fat	10	.....	Per cent found.....
Solids not fat.....	10	.....	Per cent found.....
Acidity	5	.....	Per cent found.....
Bottle and cap.....	5	.....	{Cap Bottle
Total.....	100	.....	.....

Exhibitor, ...
Address, ...
(Signed).....
Date, ... 191 Judge.

REPORT OF DAIRY INSPECTORS.

July 1, 1916, to June 30, 1918.

G. G. Carman, July 1, 1916, to July 1, 1918.

A. D. Fish, July 1, 1916, to July 1, 1918.

O. C. Van Houten, May 1, 1917, to July 1, 1918.

C. S. McBride, July 1, 1916, to March 1, 1917.

E. D. Fear, October 1, 1917, to February 1, 1918.

J. C. Kyle, May 1, 1917, to October 1, 1917.

Leslie E. Kelley, January 1, 1918, to April 1, 1918.

	Carman.....	Fish.....	Van Houten.	Marlin.....	McBride.....	Fear.....	Kyle.....	Kelley.....
Dairy inspections.....	1,893	158	905	120	460	596	212	.....
Creamery inspections.....	40	142	11	1	2	8	7	.....
Store and depot inspections.....	254	1,628	384	26	.....	111	16	.....
Cheese factory inspections.....	15	25	1	.....	.....	1	2	.....
Condensed milk factories inspected.....	8	7	4	.....	.....	.....	414	.....
*Samples of milk for butter-fat.....	307	1,181	21	.....	8	41	80	.....
*Samples of cream for butter-fat.....	140	3,187	6	.....	.....	4	11	.....
*Samples of butter.....	81	122	24	.....	.....	.....	.....	.....
*Samples for bacteriological or chemical examination.....	164	90	20	.....	18	.....	.....	.....
Milk cans inspected.....	19,865	10,600	1,240	280	483	822	322	3,425
Milk cans condemned.....	105	152	27	.....	13	84	10	.....
Milk cans returned.....	124	.....	.....	.....	.....	.....	.....	.....
Milk cans found.....	.....	.....	.....	.....	.....	.....	.....	470
Cans milk condemned.....	.....	.....	13	.....	.....	.....	.....	.....
Wagons inspected.....	167	27	89	29	42	34	27	.....
Milk trains inspected.....	14	4	.....	.....	.....	.....	10	.....
Complaints answered.....	86	117	30	3	.....	8	4	.....
Orders issued.....	160	150	26	9	23	106	10	.....
Reinspections.....	253	238	155	8	40	63	17	.....
Dairies, creameries, stores, depots and factories closed.....	26	9	3	.....	4	.....	.....	.....
Cows inspected.....	5	1	.....	894	1	89	.....	.....
Arrests.....	3	1	4	.....	.....	.....	.....	.....
Convictions.....	3	1	4	.....	.....	.....	.....	.....
Fines.....	\$20 00	.....	\$55 00	.....	.....	.....	.....	.....

TOTALS

Dairy inspections.....	4,334	Samples milk for butter-fat.....	1,640
Creamery inspections.....	206	Samples cream for butter-fat.....	3,343
Store and depot inspections.....	2,399	Samples of butter.....	177
Cheese factories inspected.....	44	Samples for bacteriological or chemical examination.....	292
Condensed milk factories inspected.....	433		
Wagons inspected.....	898	Total samples.....	5,457
Milk train inspections.....	28		
Reinspections.....	730	Complaints answered.....	252
		Orders issued.....	484
Total inspections.....	8,592		
Milk cans inspected.....			36,627
Milk cans condemned.....			391
Milk cans returned.....			124
Milk cans found.....			470
Cans milk condemned.....			13
Dairies, creameries, stores, depots or factories closed.....			42
Cows inspected.....			990
Arrests.....			8
Convictions.....			8
Fines.....			\$75 00

* All samples taken were submitted to Dr. C. W. Johnson and Professor George Olson, Department Chemists, for analysis.

Names, locations and marks of ownership of firms operating under Chapter 101, Laws 1915, being an act relating to the registration of marks upon cans and tubs used in transporting dairy products:

NAME AND LOCATION	BRAND
1. Olympic Ice Cream Company, Tacoma.	Olympic Ice Cream, Tacoma
2. Dungeness Co-operative Creamery Co., Sequim	D. C. C. Co.
3. Bremerton Creamery & Produce Co., Inc., Bremerton.....	Bremerton Creamery, Pasteurized Milk and Cream
4. The Bradner Company, Seattle.....	Brass band marked "Bradner"
5. Glendale Creamery Co., Chlmacum.....	Glendale
6. Purity Milk Products & Refrigerating Co., Centralia.....	Purity
7. Hazelwood Company, Ltd., Spokane....	Hazelwood
8. Swift & Company, Seattle.....	Top red, bottom yellow, handles and top natural color
9. Commercial Creamery Co., Spokane....	Blanchard
10. Turner & Pease Co., Seattle.....	T. & P. Co., Seattle
11. A. Kristoferson, Inc., Seattle.....	Kristoferson
12. Pleasant Hill Dairy, Wenatchee.....	Pleasant Hill Dairy
13. Pine Creek Dairy Co., Spokane.....	P. C. D.
14. The Royal Dairy Company, Bellingham..	R. D. Co.
15. Hollywood Farm, Seattle.....	"H" and "F" interlocked
16. Cowlitz Valley Creamery, Castle Rock..	C. V. C.
17. Montesano Creamery Co., Montesano....	M. C.
18. The Mutual Creamery Co., Seattle.....	Mutual Creamery Company, Jensen Creamery Company, Klock Produce Company
19. Mayflower Dairy, Inc., Seattle.....	M. F. D.
20. Elma Creamery Co., Elma.....	E. C.
21. Cascade Creamery Co., Yakima.....	Cascade Creamery Co., C. C. C.
22. Brooklyn Dairy Products Co., Seattle...	Brooklyn Dairy, a brass leaf representing clover leaf, N. C. D., BR D CO.
23. The Independent Dairy, Inc., Seattle...	Independent Dairy
24. Pure Milk Dairy, Seattle.....	P. M. D.
25. The Independent Dairy, Inc., Seattle....	Redmond Creamery
26. S. Stray, Seattle.....	Seattle D. and M. B. D.; Seattle Dairy
27. Swift & Company, Seattle.....	Swift
28. Miller Bros. Co., Tacoma.....	Miller Bros. Co., Tacoma
29. Wingard Bros. & Co., Tacoma.....	W. B. Co., Tacoma, Wash.
30. Coast Ice & Cold Storage Co., Everett..	C. I. & C. S. Co.
31. Lewis County Co-operative Creamery, Chehalis	L. C. Coop-Cry
32. Broadview Dairy Co., Spokane.....	B. D. Co. and Broadview
33. Royal Ice Cream Co., Tacoma.....	R. I. C. C.
34. Pioneer-Alpine Dairy, Everett.....	P. A. D.

DAIRY STATISTICS.

Securing statistical information from retail milk dealers is an irksome task. The present law relating to this work provides that their reports of business for the fiscal year ending June 30th shall be made to this department not later than November 1st. As many of these firms are delinquent in reporting, and as the biennial report of this department must be issued at this time, it brings added work to the clerical forces to compile these figures.

In the interests of economy it is suggested that these reports be in the department not later than July 1st, and that they cover the calendar year rather than the fiscal year ending June 30th. This procedure would conform

more nearly with the methods of the United States Bureau of Markets, who are charged with gathering statistical information from manufacturers of dairy products. Our reports from cheese factories, condenseries and ice cream plants are, therefore, a duplication of effort.

Following are the statistics of dairy products for the years 1917 and 1918:

**TOTAL PRODUCTION OF MILK AND CREAM BY COUNTIES DURING YEAR
JULY 1, 1916, TO JUNE 30, 1917.**

COUNTIES	Gallons of Milk	Value of Milk	Gallons of Cream	Value of Cream	Total Value of Milk and Cream
Adams.....	17,810	\$5,848	241	\$401	\$6,249
Benton.....	27,545	8,296	665	398	8,694
Chelan.....	71,766	18,111	5,916	8,226	26,337
Challam.....	48,226	17,310	1,700	2,575	19,885
Columbia.....	2,000	600	.....	.....	600
Clarke.....	120,747	37,280	9,398	15,838	53,098
Cowlitz.....	37,627	10,458	502	803	11,261
Douglas.....	12,000	3,360	750	1,200	4,560
Ferry.....	14,756	4,443	680	1,232	5,675
Franklin.....	24,300	7,405	200	440	7,845
Grant.....	11,212	4,495	150	295	4,790
Grays Harbor.....	592,391	171,784	24,299	36,653	208,437
Jefferson.....	63,125	18,576	904	2,025	20,601
King.....	4,716,867	1,586,013	323,825	438,527	2,024,540
Kitsap.....	199,141	48,090	4,777	5,942	54,032
Kittitas.....	53,867	17,503	2,652	3,327	20,830
Klickitat.....	14,400	4,608	299	538	5,146
Lewis.....	144,503	41,789	4,000	6,077	47,866
Lincoln.....	32,680	11,029	1,325	975	12,004
Mason.....	8,000	2,240	210	330	2,570
Okanogan.....	27,400	6,898	1,551	2,094	8,992
Pacific.....	82,012	25,007	986	1,604	26,611
Pend Oreille.....	9,125	3,650	240	480	4,130
Pierce.....	987,798	329,267	65,353	84,927	414,194
Skagit.....	156,845	45,133	5,588	9,482	54,615
Snohomish.....	423,210	113,380	18,498	21,084	134,464
Spokane.....	1,629,209	626,093	163,151	275,893	901,986
Stevens.....	32,140	11,857	910	1,668	13,525
Thurston.....	150,292	45,332	11,072	12,331	57,663
Walla Walla.....	253,916	27,201	22,931	19,526	46,727
Whatcom.....	353,142	98,227	46,487	89,167	137,394
Whitman.....	73,251	22,706	3,154	5,366	28,072
Yakima.....	256,132	83,351	28,156	36,548	119,899
Totals.....	10,651,935	\$3,457,350	750,003	\$1,035,967	\$4,493,317

**TOTAL PRODUCTION OF MILK AND CREAM BY COUNTIES DURING YEAR
JULY 1, 1917, TO JUNE 30, 1918.**

COUNTIES	Gallons of Milk	Value of Milk	Gallons of Cream	Value of Cream	Total Value of Milk and Cream
Adams.....	11,078	\$3,316	281	\$303	\$3,709
Benton.....	37,054	12,417	634	1,248	13,665
Chelan.....	87,366	29,120	7,248	9,001	33,121
Clarke.....	78,929	28,403	1,207	1,952	30,355
Columbia.....	12,025	5,040	290	723	6,368
Cowlitz.....	29,755	10,254	317	522	10,786
Douglas.....	6,750	2,025	200	320	2,345
Ferry.....	31,580	12,404	800	1,340	13,804
Franklin.....	17,911	7,074	985	1,530	8,604
Garfield.....	3,500	1,400	10	26	1,426
Grant.....	17,155	7,091	90	202	7,393
Grays Harbor.....	520,246	116,705	30,072	46,626	163,331
Jefferson.....	118,234	34,065	1,298	2,649	36,734
King.....	4,423,928	1,588,417	253,090	416,684	2,005,101
Kittitas.....	328,065	98,965	9,207	11,478	110,463
Klickitat.....	35,436	13,181	1,567	2,071	15,862
Lewis.....	15,000	5,250	320	590	5,840
Lincoln.....	128,871	49,601	3,558	6,682	56,343
Mason.....	21,808	8,578	295	521	9,099
Okanogan.....	18,050	6,170	100	240	6,410
Pacific.....	15,205	5,736	967	1,616	7,352
Pend Oreille.....	89,609	32,002	382	1,103	33,165
Pierce.....	5,000	2,150	135	250	2,400
Shadle.....	1,415,372	519,745	70,945	139,019	659,664
Skagit.....	101,334	25,046	5,270	7,278	32,324
Snohomish.....	350,833	99,022	12,160	14,070	113,692
Spokane.....	1,696,828	751,440	211,655	323,037	1,074,477
Thurston.....	151,050	54,700	10,002	14,892	69,592
Walla Walla.....	116,135	29,706	16,110	19,423	49,194
Whatecom.....	209,962	71,176	62,614	93,500	124,676
Whitman.....	71,500	27,308	4,336	6,988	34,056
Yakima.....	205,069	72,043	17,264	23,908	96,041
Totals.....	10,372,379	\$3,730,500	724,449	\$1,121,932	\$4,852,432

**BUTTER PRODUCTION IN STATE BY COUNTIES DURING YEAR JULY 1, 1916,
TO JUNE 30, 1917.**

COUNTIES	Pounds of Butterfat Used	Pounds of Butter Made	Value of Butter	Pounds of Butter Exported
Adams.....	6,918	8,291	\$3,516	.....
Benton.....	233,304	347,220	125,248	.....
Chelan.....	30,000	33,000	13,200	.....
Clallam.....	725,300	903,651	390,033	.....
Clarke.....	342,731	420,107	157,516	18,802
Columbia.....	2,348	2,786	1,114	.....
Cowlitz.....	73,000	87,059	34,173	.....
Ferry.....	102,687	127,022	50,808	60,000
Grant.....	74,040	88,903	30,716	.....
Grays Harbor.....	273,510	337,505	118,303	.....
Inland.....	177,500	224,906	80,850	.....
Jefferson.....	227,737	281,101	106,097	.....
King.....	3,012,334	3,709,159	1,349,095	1,070,140
Kitsap.....	149,447	186,234	62,581	.....
Kittitas.....	453,973	550,320	192,094	7,230
Klickitat.....	103,046	126,554	38,426	39,002
Lewis.....	521,435	649,314	225,083	.....
Lincoln.....	33,906	51,279	18,500	27,900
Mason.....	54,799	67,154	24,811	.....
Okanoan.....	236,523	471,008	162,015	12,430
Pend Oreille.....	56,990	71,075	24,853	.....
Pierce.....	1,044,709	1,224,239	408,177	100,000
San Juan.....	88,932	105,481	50,418	.....
Shagit.....	165,366	201,344	74,977	.....
Snohomish.....	1,164,837	1,428,706	521,179	2,675
Spokane.....	1,455,270	1,824,666	629,876	228,720
Stevens.....	87,234	105,549	43,175	2,818
Thurston.....	371,857	470,977	171,396	15,000
Wahkiakum.....	317,742	381,782	130,764	359,988
Walla Walla.....	557,337	675,943	234,500	160,000
Whatecom.....	1,261,171	1,526,204	564,077	133,200
Whitman.....	83,700	103,246	31,062	.....
Yakima.....	1,064,963	1,359,570	524,151	10,746
Totals.....	14,699,841	18,151,005	\$6,533,477	2,292,761

**BUTTER PRODUCTION IN STATE BY COUNTIES DURING YEAR JULY 1, 1917,
TO JUNE 30, 1918.**

COUNTIES	Pounds of Butterfat Used	Pounds of Butter Made	Value of Butter	Pounds of Butter Exported	Pounds of Butter Imported
Adams.....	12,100	14,967	\$5,995		
Benton.....	179,008	223,368	101,759		
Chelan.....	34,710	42,000	19,420		
Columbia.....	672,935	841,726	383,414		
Clarke.....	372,624	455,228	196,343	30,596	
Columbia.....	14,592	18,174	8,086		
Cowlitz.....	185,047	225,619	144,224	64,971	
Ferry.....	115,059	137,135	62,763	3,200	
Grant.....	29,980	34,779	17,963		
Grays Harbor.....	283,463	351,041	133,238		
Island.....	238,795	288,153	126,103		
Jefferson.....	150,666	186,240	88,334		
Kitsap.....	129,835	176,003	69,649		
King.....	3,133,639	3,903,491	1,754,377	1,319,616	1,896,235
Kittitas.....	425,063	518,164	236,082	49,300	
Lewis.....	408,718	500,110	228,720		1,373
Lincoln.....	27,690	35,065	17,000	12,920	
Mason.....	40,826	49,760	18,961		
Okanogan.....	397,243	490,459	201,468		
Pend Oreille.....	47,134	58,910	27,009		
Pierce.....	729,570	897,255	399,430	10,000	262,800
San Juan.....	125,692	157,032	68,973		
Skagit.....	1,109,702	1,339,725	658,127		
Snohomish.....	618,194	771,078	350,656		
Spokane.....	1,368,005	1,717,812	663,204	245,000	110,000
Stevens.....	98,200	122,499	55,125		
Thurston.....	334,741	407,226	183,942		
Wahkiakum.....	333,114	420,906	193,555	309,538	
Walla Walla.....	616,000	757,600	303,000	200,000	
Whatcom.....	701,507	908,046	410,461		
Whitman.....	73,215	88,617	38,633		4,629
Yakima.....	793,157	975,031	463,424		
Totals.....	18,800,819	17,113,252	\$7,629,628	2,245,140	2,275,037

**CHEESE MADE IN STATE BY COUNTIES DURING YEAR JULY 1, 1916, TO
JUNE 30, 1917.**

COUNTIES	Pounds	Value
Clarke.....	243,660	\$50,859
Grays Harbor.....	303,277	53,323
Jefferson.....	229,516	44,299
King.....	74,021	15,963
Pacific.....	284,978	39,917
Skagit.....	211,183	43,308
Spokane.....	2,005	401
Snohomish.....	508,893	104,433
Whatcom.....	45,094	8,603
Whitman.....	273	68
Yakima.....	101,463	24,351
Totals.....	2,004,363	\$390,525

**CHEESE MADE IN STATE BY COUNTIES DURING YEAR JULY 1, 1917, TO
JUNE 30, 1918.**

COUNTIES	Pounds	Value
Clarke.....	319,115	\$73,958
Cowlitz.....	3,719	893
Grays Harbor.....	437,317	100,497
Jefferson.....	175,776	37,401
Kitsap.....	48,592	12,148
Lewis.....	1,881	414
Okanogan.....	18,500	2,850
Pacific.....	127,750	31,938
Skagit.....	52,257	12,630
Snohomish.....	83,217	17,940
Spokane.....	57,890	13,018
Whatecom.....	8,349	1,837
Yakima.....	97,332	22,435
Totals.....	1,428,085	\$327,959

**CONDENSED MILK PRODUCED IN STATE DURING YEAR ENDING
JUNE 30, 1917.**

Pounds of Whole Milk Used	Cases Produced	Value	Cases Exported
205,657,654	1,844,097	\$8,870,825 00	1,427,949

**CONDENSED MILK PRODUCED IN STATE DURING YEAR ENDING
JUNE 30, 1918.**

Pounds of Whole Milk Used	Cases Produced	Value	Cases Exported
295,645,163	2,964,847	\$14,682,140 00	2,210,610

**TOTAL VALUE OF DAIRY PRODUCTS IN STATE, PERIOD JULY 1, 1916, TO
JUNE 30, 1918.**

Milk and cream.....	\$9,345,749 00
Condensed milk.....	23,502,971 00
Butter.....	4,567,798 00
Cheese.....	718,484 00
By-products.....	322,673 00
Total.....	\$38,457,675 00

CREAMERIES IN THE STATE OF WASHINGTON.**Adams County.**

F. Frick.....Othello
Ritzville Ice & Creamery Co.....Ritzville

Benton County.

Kennewick Co-operative Creamery.....Kennewick
Prosser Co-operative Creamery.....Prosser

Chelan County.

Leavenworth Co-operative Creamery, Inc.....Leavenworth
Pleasant Hill Dairy.....Wenatchee

Clallam County.

Angeles Co-operative Creamery Co.....Port Angeles
Dungeness Co-operative Creamery Co.....Sequim
Glendale Creamery Co.....Dungeness
Glendale Creamery Co.....Forks
Washington Harbor Creamery Co.....Route 2, Sequim

Clarke County.

Brush Prairie Creamery Co.....Brush Prairie
Farmers Co-operative Creamery Co.....Camas
Jersey Creamery Co.....Vancouver
Vancouver Creamery Co.....Vancouver

Columbia County.

Dayton Creamery & Ice Works.....Dayton

Cowlitz County.

Cowlitz Valley Creamery Co.....Castle Rock
Kelso Creamery Co.....Kelso

Ferry County.

Curlew Creamery Co.....Curlew
Eureka Farms, Inc.....Republic

Grant County.

Coulee City Co-operative Creamery.....Coulee City

Grays Harbor County.

Elma Creamery.....Elma
Montesano Creamery Co.....Montesano

Island County.

Island Produce Co.....Langley
Oak Harbor Co-operative Creamery Co.....Oak Harbor

Jefferson County.

Bishop Creamery Co.....Chimacum
Glendale Creamery Co.....Chimacum

King County.

Anderson Creamery Co.....Seattle
The Bradner Co.....Seattle
Dairy Products Co.....Seattle
Ellensburg Produce Co.....Seattle
Enumclaw Co-operative Creamery Co.....Enumclaw
J. L. Evans Creamery.....Seattle
Hollywood Farm.....Seattle
Mutual Creamery Co.....Seattle
Red Shield Creamery Co.....Seattle
Swift & Co.....Seattle
Turner & Pease.....Seattle

Kitsap County.

Bremerton Creamery & Produce Co.....Bremerton
Port Orchard Produce Co.....Port Orchard
Poulsbo Creamery.....Poulsbo

Kittitas County.

Consolidated Creamery Co.....Ellensburg
Ellensburg Produce Co.....Ellensburg
Kittitas Valley Creamery.....Ellensburg

Klickitat County.

Trout Lake Co-operative Dairy Assn.....Trout Lake

Lewis County.

Farmers Co-operative Creamery Co.....Centralia
Lewis County Co-operative Creamery Co.....Chehalis
Pleasant Valley Creamery.....Chehalis
Purity Creamery Co.....Centralia
Winlock Co-operative Creamery Co.....Winlock

Lincoln County.

Odessa Creamery Odessa

Mason County.

Mason County Fruit Growers' Assn.....Shelton

Okanogan County.

Coast Ice & Cold Storage Co.....Winthrop
Farmers Mutual Creamery Assn.....Tonasket
Methow Valley Creamery Assn.....Twisp
Oroville Creamery.....Oroville

Pend Oreille County.

Newport Creamery Assn.....Newport

Pierce County.

Lake Park Creamery.....Spanaway
Miller Brothers Tacoma
Puyallup Ice Cream Co.....Puyallup
Tacoma City Creamery.....Tacoma
Olympia Ice Cream Co.....Tacoma
Roy Co-operative Creamery Assn.....Roy

San Juan County.

Richardson Creamery Richardson
San Juan Co-operative Creamery Co.....Friday Harbor

Skagit County.

Anacortes Ice Company.....Anacortes
Skagit Valley Dairy Produce Co.....Mount Vernon
West Coast Dairy Co.....Anacortes
Carnation Milk Products Co.....Mount Vernon
Finstad & Utgaard, Inc. Conway

Snohomish County.

Arlington Co-operative Assn.....Arlington
Coast Ice & Cold Storage Co.....Everett
Fern Bluff Creamery.....Monroe
Granite Falls Creamery.....Granite Falls
Holcomb Dairy.....Snohomish
Snohomish Creamery.....Snohomish
Sultan Basin Creamery.....Sultan
Snohomish Dairy Products Co.....Snohomish

Spokane County.

Commercial Creamery Co.....	Spokane
Deer Park Creamery.....	Deer Park
Fairfield Co-operative Creamery Co.....	Fairfield
The Fairmont Creamery Co.....	Spokane
Hazelwood Company, Ltd.....	Spokane
Pine Creek Dairy.....	Spokane
Broadview Dairy	Spokane

Stevens County.

Old Dominion Creamery Co.....	Colville
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Thurston County.

A. L. Brown Farm.....	Nisqually
Capital City Creamery.....	Olympia
Olympia Dairy Products Co.....	Olympia
Tenino Creamery.....	Tenino
Yelm Co-operative Creamery.....	Yelm

Wahkiakum County.

Farmers Co-operative Produce & Warehouse Assn.....	Grays River
Ferndale Creamery.....	Grays River
Skamokawa Farmers Creamery Assn.....	Skamokawa

Walla Walla County.

Hazelwood Company, Ltd.....	Walla Walla
The Walla Walla Creamery.....	Walla Walla

Whatcom County.

Blaine Creamery Co.....	Blaine
Ferndale Creamery Co.....	Ferndale
Ford Creamery Co., Inc.....	Bellingham
Laurel Co-operative Creamery Assn.....	Route 2, Bellingham
Lynden Creamery Co.....	Lynden
Royal Dairy Co.....	Bellingham

Whitman County.

Jersey Creamery Co.....	Colfax
Palouse Creamery	Palouse
Tekoa Creamery Co.....	Tekoa
Washington State College Creamery.....	Pullman

Yakima County.

The Bradner Company.....	Sunnyside
Cascade Creamery Co.....	Yakima
Cowlche Creamery Co.....	Cowlche
Yakima City Creamery.....	Yakima

CONDENSERIES IN THE STATE OF WASHINGTON.**Clarke County.**

Henningsen Produce Co.....	Washougal
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Grays Harbor County.

Seattle Ice Cream Co.....	Montesano
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King County.

Borden Condensed Milk Co.....	Auburn
Carnation Milk Products Co.....	Seattle
Carnation Milk Products Co.....	Carnation
Carnation Milk Products Co.....	Kent
Enumclaw Condensed Milk Co.....	Enumclaw
Meadowbrook Condensed Milk Co.....	Issaquah

Lewis County.

Carnation Milk Products Co.....Chehalis

Skagit County.

Carnation Milk Products Co.....Sedro Woolley

Carnation Milk Products Co.....Mount Vernon

Federal Condensed Milk Co.....Mount Vernon

Snohomish County.

Carnation Milk Products Co.....Monroe

Carnation Milk Products Co.....Stanwood

Snohomish Dairy Products Co.....Snohomish

Whatcom County.

Carnation Milk Products Co.....Everson

Mount Vernon Cream Co.....Ferndale

Yakima County.

Cascade Creamery Co.....Yakima

CHEESE FACTORIES IN THE STATE OF WASHINGTON.

Clarke County.

Battleground Co-operative Dairy Assn.....Battleground

The Lackamas Valley Co-operative Dairy Assn.....Orchards

Cowlitz County.

Portland-Damascus Creamery Co.....Woodland

Woodland Cheese Factory.....Woodland

Grays Harbor County.

Montesano Creamery Co.....Montesano

Oakville Co-operative Cheese Factory.....Oakville

Satsop Co-operative Cheese Factory.....Satsop

Jefferson County.

Bishop Creamery Co.....Chimacum

Glendale Creamery Co.....Chimacum

Glendale Creamery Co.....Center

Kitsap County.

Silverdale Poultry Assn.....Silverdale

Lewis County.

Vonrotz Brothers' Cheese Factory.....Winlock

Pacific County.

Green Meadow Cheese Factory.....South Bend

Skagit County.

Finstad & Utgaard.....Conway

Hamilton Cheese Factory.....Hamilton

Snohomish County.

Arlington Co-operative Assn.....Arlington

Whatcom County.

Royal Dairy Co.....Bellingham

Yakima County.

Cowiche Creamery.....Cowiche

Mutual Creamery Co.....Toppenish

LIVESTOCK STATISTICS BY COUNTIES.
State Board of Equalization Report.

COUNTIES	STOCK, SHEEP AND GOATS				SHEEP BUCKS FOR BREEDING PURPOSES				HOGS				MULES			
	1915	1916	1917	1918	1915	1916	1917	1918	1915	1916	1917	1918	1915	1916	1917	1918
Adams.....	8,299	16,530	15,551	21,079	6,737	2,294	304	7,892	6,993	5,181	5,320	1,689	1,717	1,063	1,064	1,689
Asotin.....	16,707	13,075	11,190	12,487	117	50	55	4,610	4,349	2,764	2,080	79	188	217	146	117
Benton.....	69,807	70,970	65,730	79,143	212	226	62	3,001	3,404	1,310	1,785	250	209	208	252	250
Chelan.....	2,166	4,413	744	1,481	.....	.....	404	1,683	1,545	943	1,735	21	209	42	21	21
Chillam.....	1,035	961	891	1,069	13	6	14	1,304	1,096	689	1,196	132	97	104	119	132
Clarke.....	1,311	1,672	2,990	3,824	95	105	52	3,477	2,335	2,389	2,529	12	1,285	1,374	1,584	1,611
Columbia.....	20,337	16,614	15,968	17,190	218	127	157	5,554	3,888	1,540	1,893	6	1,285	1,374	1,584	1,611
Cowlitz.....	786	796	1,081	918	7	20	14	.....	919	884	1,303	12	1,285	1,374	1,584	1,611
Douglas.....	631	918	573	2,952	4	75	12	7,811	6,500	4,969	3,726	917	1,109	967	1,203	917
Ferry.....	290	245	349	994	7	15	12	853	705	909	905	111	127	137	116	111
Franklin.....	81,150	28,949	31,433	45,875	148	81	81	3,092	2,178	1,236	1,299	1,006	475	533	849	1,006
Garfield.....	9,852	11,901	11,695	11,330	90	106	95	9,661	7,693	4,469	4,565	404	405	414	464	404
Grant.....	38,530	51,298	41,293	52,552	157	1,001	97	5,973	4,983	3,295	3,300	553	568	561	563	554
Grays Harbor.....	1,095	1,084	1,050	1,250	6	8	80	2,138	1,824	1,497	2,303	12	23	9	18	12
Iceland.....	1,497	1,417	1,424	1,661	.....	.....	.....	635	947	357	495	9	11	12	9	8
Jefferson.....	1,114	828	923	936	226	118	5	908	159	239	639	13	2	13	2	13
King.....	1,676	1,719	1,756	2,473	633	684	721	4,248	4,315	4,360	4,361	440	400	492	437	440
Kitsap.....	38,668	35,638	41,831	49,476	194	317	270	5,617	3,200	2,744	2,549	7	101	78	95	7
Kittitas.....	46,008	46,913	43,648	52,067	416	381	277	13,762	9,924	6,817	6,176	247	286	273	287	247
Klickitat.....	2,586	2,549	2,139	2,028	9	13	4	3,410	3,414	2,066	5,064	100	68	69	82	100
Lewis.....	1,632	1,386	1,997	2,197	212	15	85	6,683	6,909	6,315	4,797	1,795	1,845	2,025	2,008	1,795
Lincoln.....	256	302	330	330	21	.....	1	6,240	5,235	3,894	6,506	2	401	396	342	2
Mason.....	6,037	5,846	5,562	13,434	147	106	105	361	291	255	529	3	4	2	2	3
Okanogan.....	123	113	232	232	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pacific.....	164	190	354	164	51	40	1	563	333	292	379	12	33	24	15	12
Pend Oreille.....	1,376	1,363	1,363	1,720	139	151	196	3,196	2,150	3,044	4,235	49	74	63	105	49
Pierce.....	5,066	4,810	5,212	5,296	10	2	6	448	289	322	367	3	.....	.....	.....	3
San Juan.....	947	831	396	963	20	467	39	1,277	1,048	562	1,219	4	18	16	4	14
Skagit.....	169	66	91	712	.....	.....	.....	.....	297	183	188	13	239	16	13	30
Stamania.....	397	342	292	271	104	68	39	2,104	1,983	1,463	1,983	38	46	31	30	38
Spokane.....	850	744	1,623	1,560	167	115	500	8,259	6,750	6,000	7,749	424	535	466	422	424
Stevens.....	4,092	6,009	8,965	7,813	610	.....	610	4,551	3,380	3,380	4,809	213	150	163	217	213
Thurston.....	1,299	1,517	1,832	1,732	118	13	129	2,773	2,292	2,343	2,023	25	36	50	33	25
Wahkiakum.....	104	52	80	82	.....	.....	.....	476	247	239	390	.....	.....	.....	.....	.....
Walla Walla.....	31,559	25,832	25,964	31,473	117	127	149	7,965	6,569	6,396	7,077	4,016	3,230	3,450	3,562	4,016
Wahcom.....	1,531	1,068	1,063	1,375	.....	.....	.....	2,948	1,619	1,167	1,438	30	2,008	37	37	30
Whitman.....	15,988	14,239	16,414	20,147	1,223	2	.....	35,048	27,614	19,953	15,188	2,307	2,008	2,131	2,243	2,307
Yakima.....	105,927	121,234	114,844	133,003	1,923	1,907	2,469	22,822	17,115	13,766	22,908	327	468	386	327	327
Total.....	469,823	498,578	492,704	567,408	11,637	8,574	7,046	187,920	156,338	116,083	140,164	17,495	16,185	16,682	17,516	17,495

LIVESTOCK STATISTICS BY COUNTRIES—Continued.

COUNTIES	One Year Old				Two Years Old				Three Years Old and Over				Work Horses				Stallions			
	1915	1916	1917	1918	1915	1916	1917	1918	1915	1916	1917	1918	1915	1916	1917	1918	1915	1916	1917	1918
Adams.....	1,453	1,374	1,480	1,559	1,171	1,230	1,391	1,399	1,005	1,033	1,098	1,000	7,981	8,183	9,053	9,502	62	53	55	71
Albany.....	1,565	1,554	1,584	1,593	1,451	1,486	1,609	1,601	1,413	1,401	1,719	1,381	1,394	1,393	1,547	1,476	59	59	56	56
Albion.....	587	587	584	593	451	470	469	464	481	441	547	480	1,397	1,033	1,032	1,476	22	36	15	20
Albion.....	181	103	80	104	137	131	954	133	1,062	1,053	1,063	960	1,394	1,070	1,062	2,047	6	7	13	3
Albion.....	187	192	171	182	105	924	104	140	1,062	1,063	1,063	493	1,173	3,846	3,846	2,760	10	6	6	6
Albion.....	384	436	373	273	355	327	317	354	394	394	173	311	4,122	3,846	2,875	4,122	17	8	7	3
Albion.....	384	436	373	273	355	327	317	354	394	394	173	311	4,122	3,846	2,875	4,122	17	8	7	3
Albion.....	180	179	189	177	625	723	713	654	1,189	1,122	807	806	1,397	9,353	9,353	10,683	43	35	4	5
Albion.....	180	179	189	177	625	723	713	654	1,189	1,122	807	806	1,397	9,353	9,353	10,683	43	35	4	5
Albion.....	2,253	2,267	1,785	1,976	1,677	2,403	2,528	1,633	2,063	1,933	1,932	1,662	2,247	4,638	731	863	58	44	63	74
Albion.....	265	267	350	396	425	343	302	276	1,062	1,063	1,014	1,353	2,211	1,093	2,136	2,449	16	13	14	21
Albion.....	444	383	425	398	479	479	542	323	323	308	1,074	1,356	2,103	3,817	3,817	2,860	43	49	43	43
Albion.....	842	971	871	701	645	793	856	897	2,403	1,884	1,988	1,989	2,103	3,817	3,817	2,860	43	49	43	43
Albion.....	1,199	1,422	1,422	1,644	1,513	1,977	1,721	1,472	918	923	949	1,356	2,103	3,817	3,817	2,860	43	49	43	43
Albion.....	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170	1,170
Albion.....	189	91	43	35	80	16	38	42	55	15	256	208	1,033	1,034	1,454	1,457	3	1	1	7
Albion.....	22	14	19	25	20	12	30	13	16	12	50	61	473	440	576	580	1	1	1	4
Albion.....	436	453	516	525	467	490	546	560	3,186	3,201	3,431	3,520	8,644	8,653	8,945	8,945	63	76	81	86
Albion.....	436	453	516	525	467	490	546	560	3,186	3,201	3,431	3,520	8,644	8,653	8,945	8,945	63	76	81	86
Albion.....	1,058	1,065	1,131	763	880	907	909	898	1,050	1,527	1,649	1,218	3,112	2,868	2,625	2,853	37	31	13	23
Albion.....	854	612	704	619	768	860	909	599	2,216	2,210	2,019	3,038	2,884	2,578	2,464	34	34	23	25	
Albion.....	805	847	937	823	534	576	354	276	389	895	771	738	3,507	3,410	3,890	3,478	12	10	8	8
Albion.....	2,839	2,922	2,711	2,339	2,203	2,170	2,041	2,402	2,117	1,731	1,946	1,636	14,636	14,230	14,738	15,228	63	112	73	89
Albion.....	66	40	59	51	52	89	80	279	355	325	312	442	358	358	203	235	2	3		
Albion.....	1,530	1,843	1,753	1,965	1,877	1,846	1,871	3,457	3,733	3,596	3,293	3,773	6,044	7,046	8,046	8,046	112	122	153	165
Albion.....	61	65	46	44	69	65	60	470	170	84	117	107	651	711	589	653	3	3	1	
Albion.....	42	42	40	44	44	44	44	38	126	144	161	105	1,091	1,136	1,149	941	8	15	1	
Albion.....	103	186	177	143	195	201	211	195	3,271	3,297	3,245	2,753	2,501	2,501	2,501	2,527	17	15	14	18
Albion.....	90	63	52	45	105	82	53	65	134	164	569	351	783	751	637	465	8	4	8	2
Albion.....	227	225	141	142	300	246	233	175	504	341	601	647	2,393	2,640	2,474	2,419	19	11	9	3
Albion.....	5	2	8	9	7	8	7	12	42	31	10	144	380	409	324	336	1			
Albion.....	173	126	171	242	191	224	194	1,294	1,881	1,009	545	3,213	3,213	3,213	2,882	2,709	7	8	11	42
Albion.....	1,373	1,296	1,074	1,178	1,232	1,064	906	1,234	1,776	1,251	1,224	14,405	13,899	9,915	9,915	9,915	63	47	42	42
Albion.....	653	706	841	954	860	784	987	1,000	1,500	1,564	1,613	2,018	4,854	4,854	4,854	4,854	21	19	23	29
Albion.....	305	233	233	178	222	189	142	166	687	373	413	665	1,914	2,023	1,636	1,636	24	24	10	10
Albion.....	3	9	10	21	8	8	7	5	12	15	12	1	296	297	276	273	51	55	52	52
Albion.....	1,052	969	944	892	986	995	896	873	1,646	1,601	1,505	1,321	7,851	7,903	7,903	8,086	51	55	52	52
Albion.....	290	237	231	238	306	274	253	204	1,593	1,967	552	178	3,993	3,993	3,993	3,993	15	10	156	7
Albion.....	3,623	3,290	2,894	3,016	2,895	3,140	4,017	2,753	1,986	2,069	1,645	1,977	19,844	19,941	20,940	21,686	138	107	156	112
Albion.....	1,683	1,704	1,737	1,922	1,753	2,021	3,050	2,589	3,377	2,389	3,008	2,583	9,966	8,009	7,840	7,832	61	57	59	59
Totals.....	27,055	26,272	25,416	25,792	25,212	25,554	27,151	24,461	47,506	44,904	44,101	44,521	100,747	156,547	185,995	193,218	1,438	1,105	1,093	1,108

LIVESTOCK-STATISTICS BY COUNTRIES.—Concluded:—

COUNTIES	STOCK CATTLE				BULLS FOR BREED- ING PURPOSES				MILCH COWS											
	One Year Old		Two Years Old		Three Years Old and Over															
	1915	1916	1917	1918	1915	1916	1917	1918	1915	1916	1917	1918								
Adams.....	1,966	2,272	2,432	2,265	1,746	1,654	1,895	1,413	1,568	1,382	2,236	1,580	2,928	138	118	122	2,352	2,362	2,426	
Adair.....	1,748	1,839	2,154	2,462	1,954	1,433	1,683	1,985	1,762	2,014	2,300	3,234	2,926	97	120	112	844	844	844	
Benton.....	1,731	1,708	1,961	1,981	1,841	1,653	1,653	1,252	1,605	851	479	901	2,092	38	70	69	2,408	2,355	2,856	
Boonville.....	713	827	909	1,288	898	462	702	712	312	368	403	542	1,864	38	70	57	1,864	1,864	2,069	
Challam.....	1,291	1,366	1,343	1,066	965	1,052	1,109	902	198	162	454	405	3,725	355	109	123	3,725	3,725	3,243	
Clarke.....	3,735	4,031	3,795	3,854	2,588	2,937	2,615	2,467	673	464	917	1,068	9,492	355	408	352	9,492	9,492	10,550	
Columbia.....	1,623	1,902	1,901	1,806	1,921	1,937	1,920	1,270	1,401	1,849	1,846	1,934	11,148	817	114	817	11,148	11,148	10,550	
Cowdell.....	1,556	1,986	2,188	1,976	1,113	1,230	1,569	1,415	591	766	911	572	3,107	180	173	180	3,107	3,107	4,049	
Douglas.....	1,907	2,160	2,427	2,365	1,979	1,705	1,453	1,431	781	689	665	1,027	9,477	310	92	673	9,477	9,477	10,550	
Ferry.....	1,393	1,769	1,921	1,867	1,015	1,231	1,327	1,357	1,351	1,644	2,294	1,999	20	89	81	101	1,927	1,927	1,530	
Franklin.....	379	423	539	587	211	253	425	642	145	236	539	1,082	19	16	19	593	392	388	454	
Grant.....	1,986	2,346	2,401	2,177	1,630	1,753	1,924	1,946	8,082	8,219	8,713	2,894	13	130	127	707	707	703	833	
Gray.....	1,789	2,539	2,955	2,914	1,576	1,684	1,724	1,548	1,962	1,850	1,935	1,837	2,327	86	91	125	2,327	2,410	2,894	
Gray's Harbor.....	1,905	2,265	1,943	1,640	1,345	1,060	1,467	1,185	689	679	967	764	205	183	179	193	2,782	2,901	4,849	
Idaho.....	647	500	619	518	578	540	512	531	350	11	139	493	40	43	43	55	2,782	2,901	1,895	
Jefferson.....	411	372	517	562	234	177	322	338	20	88	230	183	77	66	77	90	1,867	1,868	1,896	
King.....	3,239	3,626	3,913	3,850	2,045	2,619	2,662	2,664	2,006	2,167	2,254	2,238	77	603	711	715	2,132	2,243	2,154	
Kittapow.....	767	673	530	537	246	232	228	265	108	78	357	278	243	350	352	353	3,508	3,508	3,710	
Kittitas.....	4,276	5,144	10,455	2,643	2,866	3,912	3,809	3,069	2,719	7,712	8,367	4,094	243	380	352	383	5,518	4,330	3,656	
Latah.....	2,761	3,235	3,830	4,025	1,909	2,257	2,352	4,412	2,092	2,445	2,641	4,848	151	137	309	183	2,041	2,217	1,526	
Lewis.....	6,443	7,313	6,129	6,132	5,290	3,917	3,409	3,027	1,357	1,154	1,071	1,851	381	300	330	373	10,995	11,523	12,883	
Lincoln.....	4,010	4,404	4,513	4,400	2,281	2,539	3,105	2,965	2,057	2,295	2,716	3,431	142	154	184	202	4,895	4,765	4,083	
Mason.....	783	806	788	606	538	578	516	486	164	523	477	454	61	55	42	62	1,424	1,223	1,308	
Okanogan.....	8,101	9,587	9,624	12,914	5,392	6,339	5,048	5,325	6,090	7,279	7,723	10,346	864	400	540	487	4,460	4,892	4,897	
Pacific.....	1,282	1,938	1,965	1,801	981	915	883	959	937	1,209	969	1,357	123	123	130	133	1,962	1,894	2,474	
Pend Oreille.....	651	693	864	806	417	464	568	462	351	429	226	175	44	53	59	48	560	550	1,151	
Pierce.....	2,654	2,311	1,574	1,834	1,676	1,798	1,963	1,876	8,323	1,516	1,537	1,146	219	225	257	310	3,158	3,158	10,384	
San Juan.....	737	640	637	306	479	506	440	473	133	173	230	330	73	81	61	61	1,686	1,804	1,677	
Shawag.....	4,531	3,829	3,230	2,584	2,536	2,799	2,761	2,345	2,357	2,429	3,151	2,580	405	368	388	411	7,075	8,742	9,024	
Stamania.....	230	274	235	304	238	301	167	165	30	85	42	150	38	28	34	53	527	671	550	
Spokane.....	5,253	5,277	4,525	4,323	4,426	4,569	4,492	3,921	892	739	1,015	1,017	511	531	542	609	13,702	13,367	15,003	
Spokey.....	4,700	5,090	4,195	4,594	2,534	3,207	2,833	3,241	1,415	1,679	1,479	1,725	397	373	238	438	8,572	8,560	7,530	
Sterens.....	3,939	4,692	3,779	6,824	2,364	3,057	3,201	2,832	1,638	2,367	2,837	4,504	151	330	302	314	4,981	5,024	4,146	
Thurston.....	4,444	4,385	3,073	3,176	1,150	1,569	1,502	1,435	226	663	1,068	1,266	298	950	911	189	5,195	5,203	5,456	
Wahkan.....	587	563	603	468	386	478	440	436	31	74	76	139	189	75	63	75	1,678	1,700	2,114	
Walla Walla.....	2,363	2,465	2,470	2,661	1,533	1,706	2,273	1,903	1,646	2,446	2,400	2,132	163	182	133	145	3,079	3,079	2,860	
Whitcomb.....	4,652	4,415	4,183	4,362	3,350	3,132	3,272	3,300	1,273	1,243	2,431	2,167	438	468	469	1,173	1,334	1,367	14,874	
Whitman.....	5,028	6,182	6,944	5,917	2,944	3,241	4,123	4,305	4,437	5,562	5,692	6,670	253	253	253	253	7,769	7,769	6,968	
Yalima.....	12,039	12,039	11,785	8,418	6,441	7,901	7,890	7,890	4,641	3,929	5,199	4,678	426	476	444	444	11,973	11,564	13,189	
Totals	104,456	119,654	117,985	122,908	66,378	74,417	79,143	73,579	59,566	90,807	67,677	76,937	7,219	7,917	8,236	7,737	174,985	191,622	190,361	198,915

TOTAL NUMBER OF LIVESTOCK IN THE STATE OF WASHINGTON.

State Board of Equalization Report.

	1915	1916	1917	1918
Cattle.....	232,400	254,881	264,104	279,159
Milch cows and bulls.....	182,204	199,739	198,656	201,642
Horses.....	261,723	254,282	254,754	259,096
Hogs.....	187,929	156,338	116,053	140,164
Sheep.....	481,450	502,152	489,750	587,408

NUMBER OF FLEECES, AVERAGE WEIGHT PER FLEECE, NUMBER OF POUNDS OF WOOL PRODUCED DURING 1916 AND 1917, AND PRICE PER POUND OF WOOL.

1917 Year Book, United States Department of Agriculture.

	1916	1917
Fleeces.....	594,000	594,000
Weight per fleece (pounds).....	8.0	8.4
Production (pounds).....	4,750,000	4,988,000
Price per pound April 1.....	\$0.24	\$0.38
Price per pound October 1.....	.27	.56

ESTIMATED NUMBER OF CATTLE, SHEEP, HORSES, MULES, MILCH COWS, AND HOGS.

Taken from the Monthly Crop Reports of the United States Department of Agriculture.

	1915	1916	1917	1918
WASHINGTON—				
Cattle.....	215,000	255,000	290,000	294,000
Sheep.....	546,000	568,000	585,000	661,000
Horses.....	311,000	308,000	300,000	309,000
Mules.....	15,000	17,000	19,000	19,000
Milch cows.....	253,000	268,000	268,000	266,000
Hogs.....	327,000	314,000	283,000	283,000
UNITED STATES—				
Cattle.....	37,067,000	39,812,000	41,689,000	43,546,000
Sheep.....	49,956,000	48,625,000	47,616,000	48,900,000
Horses.....	21,196,000	21,159,000	21,210,000	21,563,000
Mules.....	4,479,000	4,583,000	4,723,000	4,824,000
Milch cows.....	21,262,000	22,108,000	22,894,000	23,284,000
Hogs.....	64,618,000	67,766,000	67,503,000	71,374,000

ESTIMATED VALUE ON FARMS JANUARY 1, 1915-1918, OF CATTLE, HORSES, MULES, MILCH COWS, HOGS AND SHEEP.
 Monthly Crop Report, United States Department of Agriculture.
 WASHINGTON

	TOTAL VALUE JANUARY 1									
	VALUE PER HEAD JANUARY 1									
	All Ages									
	1918	1917	1916	1915		1918	1917	1916	1915	
	Under 1 Year	1 Year	2 Years Under 2 and Over			Under 1 Year	1 Year	2 Years Under 2 and Over		
Cattle.....	\$21 00	\$24 50	\$53 50	\$34 90		\$36 00	\$30 40	\$30 30	\$34 90	
Horses.....	44 00	71 00	120 00	96 00		108 00	98 00	94 00	96 00	
Mules.....	56 00	82 00	135 00	104 00		117 00	111 00	106 00	104 00	
Milch cows.....				74 00		70 00	59 50	60 50	74 00	
Hogs.....				11 10		20 00	11 10	8 50	11 10	
	Lambs	Wethers 1 Yr. and Over	Rams							
Sheep.....	\$0 00	\$12 00	\$11 50	\$21 00	4 90	11 40	7 10	5 30	4 90	
Total Value (all livestock).....						\$77,994,000	\$62,055,000	\$60,071,000	\$63,833,000	

UNITED STATES

	TOTAL VALUE JANUARY 1									
	VALUE PER HEAD JANUARY 1									
	All Ages									
	1918	1917	1916	1915		1918	1917	1916	1915	
	Under 1 Year	1 Year	2 Years Under 2 and Over			Under 1 Year	1 Year	2 Years Under 2 and Over		
Cattle.....	\$22 45	\$46 80	\$55 02	\$33 83		\$40 83	\$35 92	\$33 53	\$33 83	
Horses.....	45 72	70 25	114 34	103 53		104 23	102 69	101 60	103 53	
Mules.....	57 61	86 36	13 96	112 86		128 74	118 16	113 83	112 86	
Milch cows.....				56 33		70 69	59 63	53 92	56 33	
Hogs.....				9 87		19 51	11 76	8 40	9 87	
	Lambs	Wethers 1 Yr. and Over	Rams							
Sheep.....	\$13 70	\$11 25	\$20 77	4 50		11 82	7 13	5 17	4 50	
Total Value (all livestock).....						\$6,735,613,000	\$6,090,670,000	\$5,969,253,000	\$6,090,670,000	

The following list of active livestock organizations was obtained by the Extension Service of the Washington State College, through the County Agricultural Agents of the state.

NAME OF ORGANIZATION	President	Address	Secretary	Address	No. of Members	When Meetings Occur	Place of Meetings
Pierce County Milk Producers' Association	O. R. McKinney	Tacoma	J. Wilcox	Roy	150	First Mon. in June	Tacoma
Snohomish County Dairymen's Association	John Lee	Norman			200	First Sat. in Oct.	
Snohomish County Guernsey Association	J. E. Wraga	Arlington			10	At call	
Garden Jersey Club	W. G. Grimm	Arlington			15	At call	
Arlington Bull Club	Genas Farrington	Arlington			10	At call	
Grants Falls Bull Club	Hans Thompson	Arlington	Floyd Chewa		3	At call	
Thompson Bull Club	F. C. Fuchs	Sultan			5	At call	
Sultan Bull Club	E. F. Glover	Monroe			4	At call	
Monroe Bull Club	J. A. Kruetson	Arlington			4	At call	
Stillaguamish Cow Testing Association	J. A. Kruetson	Stanwood					
Grays Harbor Dairymen's Association	Ransom Minkler	Elma	J. R. Murphy	Montesano	150	At call	
Castle Rock Cow Testing Association	G. Howard						
Washington Wool Growers' Association	Huntington	Castle Rock	F. A. Roglin		15	Annually	Castle Rock
Lewis County Pure Breeders' Association	Tom Drumheller	Walla Walla	F. F. Sears	Prosser	55	Semi-annually, winter and summer	Yakima
Grant County Cattle Growers' Association	N. Hamilton	Chehalis	G. R. Walker		75	2d Sat. each month	Chehalis and vicinity
Whatcom County Jersey Cattle Club	H. V. Swan	Low Gap	C. E. Cline	Burke	50	Annually	Low Gap
Whatcom County Guernsey Cattle Club	Cyrus Gata	S. Bellingham	E. F. G. Carlyon	Bellingham	15	Annually	Bellingham
	H. B. Douglas	Ferndale	B. C. Vander Greind	Lynden	15	Annually	Lynden or Ferndale
Ferndale Cow Testing Association	H. B. Douglas	Ferndale	T. C. Johnson	Ferndale	20	Quarterly	No set place
Whatcom County Dairymen's Association	O. P. Brown	Everett	A. H. Dahlquist	Sumas	250	Monthly	No set place
Whatcom County Poultry Association	B. S. Hiller	Bellingham	G. Van Horn	Marlette	130	Monthly	No set place
Shagit County Dairymen's Association	Wm. Kantgen	Mt. Vernon	John B. Hall	Mt. Vernon	600	At call of president	
Clinton Bull Club	F. I. Kingsley	Clinton	H. H. Williams	Clinton	12	Irregular	
Whidby Cow Testing Association	J. D. Caplan	Oak Harbor	Fred Morgan	Oak Harbor	15	Irregular	Oak Harbor
Island County Guernsey Breeders' Association	John Frostad	Oak Harbor	J. M. Pratt	Oak Harbor	14	Last Sat. in Aug.	Oak Harbor
Bayview Bull Club	F. A. Harth	Langley			11	Irregular	
Clatsop County Cow Testing Association	Roy Dobbs	Washougal	Geo. Anderson	Battis Ground	41	Annually	Vancouver
Riverside Bull Club			H. H. Peter	Kennswick			
Richland Bull Club			J. C. Willis	Richland			
Prosser Bull Club			Lee Ferguson	Prosser			
Dairymen's Union			Geo. McNeally	Patterson			
Mt. Adams Cattle Association	Sam Ross	Richland	J. O. Willis	Richland			
Trout Lake Cattle Association	Ulrich Zuberbuchler	Trout Lake	R. R. Krepe	Laurel			
			O. A. Pearson	Trout Lake			

LIVESTOCK ORGANIZATIONS.—Concluded.

NAME OF ORGANIZATION	President	Address	Secretary	Address	No. of Mem- bers	When Meetings Occurs	Place of Meetings
South Union Bull Association.....	Fred Heinen.....	Tunwater Routes	.....	.....	7	.....	South Union
Thurston County Dairy and Farm Products Association.....	D. Johnson.....	Little Rock..	R. E. Munn.....	.....	.....	.....	.....
Walla Walla Milk Producers' Association...	V. E. Brown.....	Route 2, Walla Walla	R. L. Ridley.....	.....	27	5th of each month	Green Valley School
Walla Walla Cow Testing Association.....	W. E. Brown.....	Walla Walla..	C. Baker.....	.....	30	On call February and August	County Agent's office
Pend Oreille Livestock Association.....	F. J. Sullivan..	Cusick.....	E. J. Batchelor..	.....	26	January on call...	Court House, Newport
Wahkiakum County Cow Testing Association...	H. L. Welster..	Skamokawa..	F. A. Durrah.....	.....	.....	.....	.....
Cattle and Horse Raisers' Association...	B. J. Batie.....	Twisp.....	G. W. Sprouse...	.....	50	First Mon. in Apr	Twisp
Ellechem Percheron Horse Company.....	S. A. DeMerchant	Oroville.....	Roy Bury.....	.....	6	.....	.....
Okanogan County Livestock Association...	Jas. E. Forde..	312 Exchange Bank Bldg., Spokane	Hugh Miller.....	.....	.....	April each year...	Okanogan
Wauconda Cattle and Horse Raisers' Association.....	O. H. Smith.....	Wauconda.....	B. C. Gregory.....	.....	50	June	Wauconda Hall
Concomully Cattle and Horse Raisers' Association.....	J. M. Meyers..	Concomully...	P. H. Pinkston..	.....	35	Quarterly	Concomully
Loop Loop Cattle and Horse Raisers' Association.....	John Chalmers..	Okanogan.....	O. H. Eller.....	.....	36	Last Sat. in Jan., April, July, Nov	Pine Grove School
Methow Valley Cattle and Horse Association	Geo. Isenhart..	Winthrop...	F. F. Ventzke...	.....	.....	January	Winthrop Brewster
Brewster Cattle and Horse Association...	Amos Tupper..	Brewster.....	Chester Tupper..	.....	.....	January	.....
Chilliwist Cattle and Horse Association...	W. E. Freis.....	Brewster.....	J. N. Moore.....	.....	35	Last Friday each quarter	Park Grange Hall
Ellechem Horse and Cattle Association...	M. D. Hirsch- berger.....	Oroville.....	Otto Hirsch- berger.....	.....	.....	.....	.....
Loomis Cattle and Horse Association.....	S. G. Bernard..	Loomis.....	Will Forde.....	.....	.....	December	Loomis
Lower Methow Horse and Cattle Association	Virgil Dunbar..	Fateros.....	Chas. Grant.....	.....	.....	January	Methow
Fine Creek Cattle and Horse Association...	W. J. Utt.....	Riverside.....	Sherman Burden..	.....	.....	March	Pine Creek Grange Hall
Stevens County Livestock Association.....	Jeo. Turner.....	Myers Falls..	Earl Gates.....	.....	.....	.....	.....
Stevens County Breeders' Club.....	H. T. Skeels..	Addy.....	Mr. Lewis.....	.....	.....	.....	.....
Washington State Dairyman's Association...	Wm. Bishop.....	Chinacum.....	Ada B. Miller.....	.....	.....	On call	.....
Northwest Livestock Association.....	Thos. F. Wren..	Spokane.....	.....	.....	.....	November	Lewiston, Idaho

STALLION REGISTRATION.

The law relating to the registration of stallions and jacks was amended at the 1917 session of the legislature and became effective June 8, 1917. Provisions were made in this enactment to limit the fees that should be charged by the examining veterinarian for the inspection of stallions for soundness, and provided that they should have the endorsement of the commissioner of agriculture before undertaking this work. It was also provided that all jacks and stallions used for public service should be licensed. Previous to this law becoming effective, all licenses were issued for a period of two years, dating from the date of issuance. The present law, however, provides that all licenses shall expire on December 31st of the year following the year in which the license was issued. This will be of much assistance in checking the renewals.

The enforcement of this act resting, as it does, on the commissioner of agriculture, has frequently brought about much correspondence on the subject. If district veterinary inspectors of the department were appointed, there is reason to believe that a more careful surveillance over stallions used in public service could be had.

Following will be found a list of registry associations, and it will be found that we have included two jack associations for the reason that the standards of both are about the same. Neither association has been recognized by the National Society of Record Associations for the reason that their standards do not meet the requirements of the national association. Height, color and measurements appear to be the only requirements necessary for registration in the jack associations, whereas breeding is of first importance in the stallion registry associations recognized by this department.

Registry Associations.

Recognized as standard by the Washington Department of Agriculture:

American Trotter.....	American Trotting Register	American Trotting Register Association, 137 South Ashland Boulevard, Chicago, Ill.
Arabian	Stud Book of the Arabian Horse Club of America.....	Arabian Horse Club of America; H. K. Bush-Brown, secretary, Newburgh, N. Y.
Belgian Draft	American Register of Belgian Draft Horses.....	American Association of Importers and Breeders of Belgian Draft Horses; J. D. Conner, Jr., secretary, Wabash, Ind.
Cleveland Bay	American Cleveland Bay Stud Book.....	Cleveland Bay Society of America; R. P. Stericker, secretary, 4035 Sheridan Road, Chicago, Ill.
Clydesdale	American Clydesdale Stud Book.....	American Clydesdale Association; P. E. Fleming, secretary, U. S. Yards, Chicago, Ill.
French Coach	French Coach Stud Book	French Coach Horse Society of America; Duncan E. Willett, secretary, Maple avenue and Harrison street, Oak Park, Ill.

French Draft	National Register of French Draft Horses.	National French Draft Horse Association of America; C. E. Stubbs, secretary, Fairfield, Ia.
German Coach, Oldenburg	German, Hanoverian and Oldenburg Coach Horse Stud Book....	German, Hanoverian and Oldenburg Coach Horse Association of America; J. Crouch, secretary, Lafayette, Ind.
Hackney	American Hackney Stud Book.....	American Hackney Horse Society; Gurney C. Gue, secretary, 460 Fulton avenue, Hempstead, L. I., N. Y.
Jacks and Jennets.....	American Jack Stock Stud Book.....	American Breeders' Association of Jacks and Jennets, J. M. Jones, secretary, Columbia, Tenn.
Jacks and Jennets.....	Standard Jack and Jennet Registry of America	Standard Jack and Jennet Registry Association; Wm. E. Morton, secretary, Kansas City, Mo.
Morgan	American Morgan Register	American Morgan Register Association; T. E. Boyce, secretary, Middlebury, Vt.
Percheron	Percheron Stud Book of America.....	Percheron Society of America; Wayne Dinsmore, secretary, U. S. Yards, Chicago, Ill.
Percheron	The American Breeders' and Importers' Percheron Registry..	The American Breeders' and Importers' Percheron Registry Co.; John A. Forney, secretary, Plainfield, Ohio.
Saddle Horse	American Saddle Horse Register	American Saddle Horse Breeders' Association; R. H. Lillard, secretary, Louisville, Ky.
Shetland Pony	American Shetland Pony Club Stud Book.	American Shetland Pony Club; Miss Julia M. Wade, secretary, Lafayette, Ind.
Shire	American Shire Horse Stud Book.....	American Shire Horse Association; W. G. Lynch, secretary, Tonica, Ill.
Suffolk	American Suffolk Horse Stud Book....	American Suffolk Horse Association; R. P. Stericker, secretary, 4035 Sheridan Road, Chicago, Ill.
Thoroughbred	American Stud Book....	The Jockey Club; W. H. Rowe, Register, 18 East 41st street, New York, N. Y.
Welsh Pony and Cob...	Welsh Pony and Cob Stud Book.....	The Welsh Pony and Cob Society of America; Miss Julia M. Wade, secretary, Lafayette, Ind.

Foreign Associations.

Recognized as standard by the Washington Department of Agriculture:

Societe le Cheval de Trait Belge; Chevalier G. H. Hynderick, secretary, Brussels, Belgium. Stud Book des Chevaux de Trait Belges.

Clydesdale Horse Society of the United Kingdom of Great Britain and Ireland; Archibald MacNeillage, secretary, 93 Hope street, Glasgow, Scotland. Clydesdale Stud Book.

Societe des Agri culteurs de France; Henri Johanet, secretary, 8 Rue d'Athens, France. Stud Book des Chevaux de Trait, Francals.

Hackney Horse Society; Frank F. Euren, secretary, 12 Hanover Square, London, W., England. Hackney Stud Book.

La Societe Hippique Percheronne de France; E. Lemaire, secretary, Nogent-le-Rotrou, France. Stud Percheron de France.

Shetland Pony Stud Book Society; R. W. Walker, secretary, 3 Golden Square, Aberdeen, Scotland. Shetland Pony Stud Book.

Shire Horse Society; J. Sloughgrove, secretary, 12 Hanover Square, London, W., England. Shire Horse Society Stud Book.

Suffolk Horse Society; Fred Smith, secretary, Rendlesham, Woodbridge, Suffolk, England. Suffolk Stud Book.

Australian Stud Book; W. C. Yuille & Sons, Melbourne, Australia. Australian Thoroughbred Stud Book.

General Stud Book; Weatherby & Sons, 6 Old Burlington street, London, W., England.

The Welsh Pony and Cob Society; John P. Bache, secretary, Knighton, Radnorshire, Wales. Welsh Pony and Cob Stud Book.

Canadian National Records; Secretary, Ottawa, Canada.

Not recognized as standard by the Washington Department of Agriculture:

American Horse Breeders' Trotting Registry Association, 161 High street, Boston, Mass.

American Horse Registry Association; N. J. Harris, secretary, Des Moines, Ia.

American Iceland Pony Club; George H. Simpson, secretary, Wheaton, Ill.

American Percheron Registry Association; S. H. Heberling, secretary, La Grange, Ill.

Belgian-American Draft Horse Registry; A. J. Myers, secretary, Lovington, Ill.

Coach and Draft Horse Association of America; Frederick Wrightman, secretary, La Crosse, Wis.

Hartman Stock Farm Registry Record Company; Adam Kramm, secretary, Columbus, Ohio.

International Consolidated Record Association; H. A. Jones, secretary, Pen Yan, N. Y.

Morrison's International Roadster Register, Des Moines, Iowa.

National Percheron Horse Breeders' Association; W. E. Phillips, secretary. (Address unknown).

National Hackney Stud Book; N. A. Randall, secretary, Crawfordsville, Ind.

The American Jack Register; W. L. DeClow, secretary, Cedar Rapids, Iowa.

The National Standard Pacing and Trotting Horse Breeders' Association; Thos. C. Parsons, registrar, Cleveland, Ohio.

United States Horse Register; J. E. Ragsdale, secretary, Gibson City, Ill.

Wagon Horse Association of America; W. B. Carpenter, president, Kansas City, Mo.

Following is a list of counties showing the number and breed of stallions that are duly licensed to be used in public service.

A directory of stallions showing the data on each individual animal will soon be issued by this department and will be available for free distribution:

COUNTIES	STALLIONS											JACKS	TOTALS				
	Purshon.....	Belgian.....	Shire.....	Clydesdale.....	French Draft.....	French Coach.....	German Coach.....	Arabian.....	Morgan.....	Thoroughbred.....	American Trotting	Grade Stallions....	Pure-bred Jacks...	Grade Jacks.....	Total Pure-Bred...	Total Grade.....	Grand Total.....
Adams.....	18	2	3	1								10	4	3	23	13	41
Asotin.....	5	1	1	1								11			8	11	19
Benton.....	7											4	1	2	8	6	14
Chelan.....	2									2		8	2	1	6	9	15
Clallam.....	2											1			2	1	3
Clarke.....	3										1			1	4	5	8
Columbia.....	4	4	2									3	1	2	11	5	16
Cowlitz.....	2	1											1		4		4
Douglas.....	13	4	9	2	3	1	1					32	1	5	39	38	77
Ferry.....	3	1										5		2	4	7	11
Franklin.....	7		3		1							3	1	3	11	6	17
Garfield.....	6	2	1	2	1							1	2		14	1	15
Grant.....	19	3	5	1	1		1			1		22		2	31	24	55
Grays Harbor.....	2	1			1										4		4
Island.....	1														1		1
King.....	3		1									2			4	2	6
Kitsap.....	1														1		1
Kittitas.....	10		1	2	2				1		1	7			17	7	24
Klickitat.....	4	4	1	2	4							3			18	3	21
Lewis.....	2	3	1				1					4	2	1	9	5	14
Lincoln.....	20	7	4	2	2							19	1	7	44	26	70
Okanogan.....	10		5	2	1	1	1	1		1		33	2	2	24	40	64
Pend Oreille.....												3			3		3
Pierce.....		1										3			1	3	4
Skagit.....					1							2			1	2	3
Skamania.....												1			1		1
Snohomish.....	2			1								2			3	2	5
Spokane.....	13	6	6		2							8	13	1	40	9	49
Stevens.....	5	2	1									16	2	1	10	17	27
Thurston.....					1	1						5			2	5	7
Walla Walla.....	12	1	3		1							7	2		19	7	26
Whatcom.....	1	3										1			4	1	5
Whitman.....	41	13	30	22	3							26	13	13	122	39	161
Yakima.....	17		4	4	1	1			1			17	3	1	31	18	49
Out of state.....	3	2	1						1			7			7	7	14
Totals.....	243	61	82	42	24	4	4	1	3	4	2	275	62	47	532	322	854

NUMBER OF STALLIONS AND JACKS LICENSED IN STATE SINCE ENACTMENT OF STALLION REGISTRATION LAW.

YEAR REPORT PUBLISHED	STALLIONS		JACKS	
	Pure-bred	Not Pure-bred	Pure-bred	Not Pure-bred
1913.....	430	307	7	67
1914.....	584	534	18	83
1916.....	506	423	20	71
1918.....	478	276	56	47

ANIMAL DISEASE CONTROL.

The eradication and control of contagious and infectious animal diseases in this state has taken much of the time and funds of this division. Livestock constitutes an important factor in the agricultural development of the state, and this industry must be safeguarded both from a public health and economic standpoint. As an example we have the suppression of tuberculosis, the eradication of hog cholera, the prevention of the spread of glanders, the treatment and control of sheep scab, and the institution of control measures in districts in which rabies is prevalent. Many of the communicable animal diseases are transmissible to man, and measures taken for their control are really public health measures and deserve the attention of the general public as well as those interested only in livestock.

The conservation of the livestock of the nation in the present crisis is a problem that deserves our close attention, and this division has been especially watchful in the matter of investigating suspected cases of contagious animal diseases. In this manner we have endeavored to do our part in the production of food for our people at home, our allies and our troops abroad.

The need of a state laboratory to be used in diagnosing animal diseases is often felt, as it is often impossible to correctly diagnose many of the diseases of farm animals under field conditions. This laboratory should be equipped for bacteriological, chemical and pathological work and could be used in co-operation with the State Board of Health, Public Service Commission, Industrial Insurance Commission, State College, University, and other state agencies. At the present time we are not equipped to make laboratory examinations of any material submitted to us for that purpose and are not able to make a study of obscure diseases and ascertain the cause. Because of this, unnecessary losses of livestock often occur. The laboratory diagnosis of rabies is now being done for us by the State Commissioner of Health and the veterinary department of Washington State College, but they do not have the apparatus necessary to diagnose certain other pathological conditions. Likewise, the chemists of the State University and the State College cannot handle many of the important chemical analyses so necessary in the performance of our work.

INTERSTATE TRANSPORTATION OF LIVESTOCK.

Our laws and regulations relating to the transportation interstate of cattle, horses, swine and sheep are based upon the necessity of protecting the livestock of this state from extra-state sources of infection. This is a problem requiring our constant attention. The department orders relative to these matters have been transmitted to the Chief of the United States Bureau of Animal Industry, and the veterinarians having charge of the livestock sanitary control work in the several states, and they in turn notify the veterinarians who are authorized by them to examine livestock for interstate shipment. We have found, however, that in some cases our regulations are violated both by shippers and examining veterinary inspectors. The veterinarians comprising the membership of the Northwest Livestock Sanitary Association have taken steps to abate this condition by withdrawing the authorization to inspect livestock destined to other states from veterinarians who have been guilty of wilfully violating the interstate regulations of the state to which the livestock has

been destined. Shippers who have held our state regulations lightly have been watched until we have reason to believe that very few diseased animals are now being shipped to us.

At the present time—November 1, 1918—our regulations provide as follows:

Breeding and dairy cattle brought into this state shall be accompanied by health certificate, including a tuberculin test chart.

Pure-bred swine may be crated and shipped by express upon affidavit of the owner that the animals have not been affected with hog cholera and have not been exposed thereto.

Swine from public stockyards, after entering the state, must be quarantined for three weeks on the premises of the owner. A federal regulation requires the immunization by anti-hog cholera serum of all swine shipped interstate from public stockyards.

Horses must be accompanied by a health certificate.

Sheep shall be accompanied by a health certificate and an affidavit of the owner to the effect that they are not, to the best of his knowledge, affected with scabies, and have not been exposed thereto.

Livestock, intended for immediate slaughter, billed to recognized slaughtering establishments, are exempt from the foregoing regulations.

BOVINE TUBERCULOSIS.

The statistics of the department in connection with tuberculosis would indicate that we are making substantial progress in the control and ultimate eradication of this disease. The intradermal tuberculin test has been used with satisfactory results, as it was clearly demonstrated during the biennium of 1914-16 that this method of testing in the hands of a trained operator will give excellent results in eradicating the disease from the herd. While our investigations show that the disease is widespread throughout the state, there is cause for congratulation to learn that Washington is not so extensively affected as are most other states of the Union. The inspection work that has been done has indicated to us many of the centers of infection, and one of the most serious obstacles to the eradication of the disease in a community has been the absence of a specific law whereby we could apply the tuberculin test to the suspected herd without the permission of the owner. The department inspectors have, however, in many instances, applied the test after it has been conclusively proved that tubercular animals have originated from that herd.

A perusal of the appended table would indicate that the disease appears to be diminishing as rapidly as we had hoped, our results showing 3.88 per cent of diseased cattle. It is to the herds that have been under our care for the past two or more years that we must look to to show favorable results. Improvement in the condition of diseased herds cannot be expected always after the application of one test, although many cases are on record in the department in which the spread of the disease appears to have been arrested after one test and the removal of the reactors.

The prejudice of the public against the use of meats and dairy products of reacting cattle has been a serious handicap to our efforts to make headway in the matter of controlling bovine tuberculosis. This disease may be looked upon from two viewpoints; first as an economic problem affecting the

financial interests of the owner, and second, as a menace to the public health. In the past it has been met by the destruction of the reacting animal, irrespective of whether or not physical symptoms of tuberculosis were exhibited. The fact that pasteurization of the milk of a clinically healthy but reacting cow would safeguard the consumer has not been considered. Tuberculin tests applied annually and the removal of the reactors does not protect the public against infected dairy products. Pasteurization renders the product reasonably safe, but it must be remembered that this method does not reach the source of the contamination. Should we draw a line between the animal which has reacted and appears healthy and the animal which clearly shows evidence of tuberculosis? Should we demand a state-wide pasteurization law, or a state-wide tuberculin test law, or both? Should we allow the use of milk from reactors under restrictions which will safeguard the public? Should we control the sale of tuberculin? These questions are of the utmost importance to the cattle interests of the state and should receive the serious consideration of our legislators. If some plan can be put in operation whereby the owner of tubercular cattle can eradicate the disease from his herd without serious financial loss, the tuberculosis problem will be solved from the economic standpoint. The indemnity feature of our law, together with the indemnity that is promised through the United States Bureau of Animal Industry, will aid materially in handling the slaughtered reactors. The problems then remaining are the disposal of the physically healthy reactor which is held in quarantine, and the handling of the herd of the man who does not allow his herd to be tested by any legal authorities. Such owners often secretly test their own herds which may be diseased and are a menace to their neighbors who are making an honest effort to rid their own cattle of this insidious disease. The holding of the physically healthy reactors by the Bang method and the sale of the pasteurized products under proper district veterinary inspector surveillance will aid in solving the problem. As for the uncontrolled sale and use of tuberculin, there is ample reason to believe that this one factor has been a great hindrance to the successful control of the disease and should be stopped.

The line of work in bovine tuberculosis control has been practically the same as in the previous biennium with the exception that numbered identification tags are now being used on all animals tested. This will assist our inspectors in tracing the origin of cattle which have been previously tested by us. Another innovation is the co-operation of the tuberculosis eradication division of the Bureau of Animal Industry in the establishment of accredited herds and the testing of cattle within circumscribed areas.

The Division of Dairy and Livestock has enjoyed the hearty co-operation of the health officers of the various cities of the state and is particularly indebted to the city of Seattle, which maintains a force of four veterinarians, two of whom are bonded to this department. Because of the tuberculin tests conducted by these men, the department is relieved of the testing of cows which furnish the milk supply to Seattle.

The tuberculin testing of cattle has been continued except when interrupted by calls of a more urgent nature. Early in September of 1918 it was seen that the funds appropriated to meet the expenses of the veterinary inspectors would not admit of the continuance of this work as heretofore. A circular letter was sent to the county agents, applicants, and others interested

in this work, calling their attention to the present status of this phase of our work. It was arranged that bonds be prepared for some of the local veterinarians so that the inspection and testing could be carried on under the provisions of section 3201.

Following is a list of veterinarians who are now (November 1, 1918) under bond to the department:

J. H. Martin.....	Spokane
H. T. Graves.....	Puyallup
L. C. Pelton.....	Seattle
C. H. Schultz.....	Seattle
Jas. P. Johnson.....	Seattle
Robert McBride.....	Everett
Jas. T. Seeley.....	Seattle
F. E. Smith.....	Seattle
W. W. Stewart.....	Chehalis
A. C. Brown.....	Vancouver
Cliff Ackley.....	Winlock

In connection with the activities of the department in the eradication of tuberculosis it is believed that the following excerpt from the report of the Chief of the Bureau of Animal Industry for the fiscal year ending June 30 is of great value to the livestock raiser:

"The observations made in the course of the year, like those made at the station for approximately a dozen years, have again emphasized the great value of scrupulous cleanliness as an aid in fighting the spread of tuberculosis among domestic animals.

"Tests made with domesticated white and wild gray mice proved that their bodies may harbor enormous numbers of tubercle bacilli months after they have been permitted to eat fresh tuberculous material on only one day. The tuberculous material fed in the tests contained bovine types of tubercle bacilli, and it is not known whether human types would give similar results. The mice not only harbor the bacilli in their bodies but expel them freely through their bowels with their feces in gradually increasing numbers. Microscopic preparations of the lungs of mice made six months after they had eaten the tuberculous material often look like smears from pure cultures of tubercle bacilli. Mice which had eaten tuberculous material on only one day were fed three to five months later to a number of hogs, one hog receiving only a single mouse, another two mice, another three, and another four. All four hogs were found to be affected with tuberculosis approximately three months later, and the disease was either completely generalized or rapidly spreading.

"The tests formed a part of a series of investigations undertaken to find an explanation for the recurrence of tuberculosis in originally tuberculous, cleaned herds of cattle. Such recurrence is not uncommon, and is usually attributed to inadequate disinfection of premises or some other cause which can not be accepted as satisfactory in the light of our observations. If the common gray mouse, which is very abundant in our stables, can become a carrier of tubercle bacilli by eating tuberculous material on only a single day, and remain a carrier and disseminator of tubercle bacilli for months, it is urgently necessary in our attempts to disinfect stables which have harbored tuberculous animals to include the extermination of mice. Tubercle bacilli expelled on feed from the bodies of infected mice probably are more dangerous

than those which are adherent in masses of dung on the walls of stables or those which have been trampled into the floor."

During the past biennium the United States Bureau of Animal Industry has supplied this department with 31,500 cubic centimeters of subcutaneous tuberculin, which has been distributed to local veterinarians.

During the four months following July 1st, 1918, there have been received and distributed 3,000 doses of this biological product.

INDEMNITY FROM UNITED STATES GOVERNMENT.

The 1919 agricultural appropriation bill which has been passed by congress contains an item providing for the payment of indemnities to owners of cattle destroyed on account of tuberculosis. To secure this indemnity the state in which the cattle are kept must have a working co-operative agreement and must pay an equal amount to the owner, and in no case will the federal government pay an amount in indemnity in excess of that paid by the state. The federal government will pay one-third of the difference between the appraised value of the cattle and the salvage value of the slaughtered animals. No indemnity payment is to exceed \$25.00 for a grade animal or more than \$50.00 for any pure-bred animal. Our state laws provide that we pay not more than \$35.00 in indemnity for an animal showing lesions of tuberculosis. The compensation from the state added to that of the United States Department of Agriculture will no doubt have the effect of removing some of the opposition that we now meet in this work, but some changes are necessary in our laws relating to this disease so that the owners of destroyed tubercular cattle may receive federal aid.

SUMMARY OF TUBERCULIN TESTS PREVIOUS TO CREATION OF THE STATE DEPARTMENT OF AGRICULTURE.

	Number Herds Tested	Number Animals Tested	Number Reactors
1895-1896.....	3	23	1
1896-1898.....	1	16	5
1898-1900.....	9	40	8
1900-1902.....	14	387	71
1902-1904.....	55	340	40
1904-1906.....	97	1,456	268
1906-1908.....	115	2,823	352
1908-1910.....	316	9,310	1,317
Totals.....		14,405	2,062

1910-June 10, 1913—No report.

TUBERCULIN TESTS UNDER STATE DEPARTMENT OF AGRICULTURE.

	Number Herds Tested	Number Animals Tested	Number Reactors
June 10, 1913, to June 30, 1914.....		6,562	349
July 1, 1914, to June 10, 1915.....	513	11,280	1,106
June 10, 1915, to June 30, 1916.....	2,292	28,930	1,854
July 1, 1916, to June 30, 1918.....	3,866	48,352	1,896
Totals.....		66,624	5,305

**TUBERCULIN TESTS CONDUCTED BY THE DEPARTMENT OF AGRICULTURE,
JULY 1, 1916, TO JUNE 30, 1918.**

COUNTIES	Number Herds Tested	Number Cattle Tested	Number Healthy	Number Diseased	Number Suspects	Number in Quarantine	Percentage of Diseased Cattle
Adams.....	4	74	74				
Asotin.....	1	24	24				
Benton.....	174	918	914	4			.43%
Chelan.....	11	119	104	15		5	12.6 %
Clallam.....	11	183	183				
Clarke.....	101	1,666	1,544	114	8	6	6.84%
Columbia.....	1	1	1				
Cowlitz.....	17	312	304	8		7	2.56%
Douglas.....	1	2	2			2	
Ferry.....							
Franklin.....	9	208	204	4		1	1.92%
Garfield.....							
Grant.....	73	744	715	29		4	3.89%
Grays Harbor...	147	1,934	1,902	32	4	2	1.44%
Island.....	11	222	208	14		2	6.31%
Jefferson.....	14	363	351	12		6	3.31%
King.....	666	8,867	8,846	492	29	141	5.55%
Kitsap.....	6	87	70	16	1	3	18.38%
Kittitas.....	16	814	683	128	3	56	15.72%
Klickitat.....	11	32	28	4			12.50%
Lewis.....	196	2,011	1,941	62	8	14	3.09%
Lincoln.....	76	662	659	3			.45%
Mason.....	8	182	182				
Okanogan.....	50	379	355	24		1	6.33%
Pacific.....	16	513	508	3	2	2	.59%
Pend Oreille.....	12	49	48	1		1	2.04%
Pierce.....	231	3,912	3,769	138	5	43	3.53%
San Juan.....	2	23	22	1			4.34%
Skagit.....	60	968	818	130	15	3	13.57%
Skamania.....	1	5	5				
Snohomish.....	519	5,584	5,414	157	13	55	2.81%
Spokane.....	161	2,752	2,708	44		9	1.60%
Stevens.....	106	1,091	1,089	2			.18%
Thurston.....	264	3,323	3,213	104	5	1	3.18%
Wahkiakum.....	335	4,326	4,167	159		31	3.67%
Walla Walla.....	112	1,302	1,294	7	1	2	.54%
Whatecom.....	361	3,985	3,803	171	11	4	4.29%
Whitman.....	14	408	408				
Yakima.....	67	818	796	22		5	2.69%
Totals.....	3,866	48,852	46,861	1,896	106	411	3.88%

**TESTS REPORTED BY VETERINARIANS NOT IN DEPARTMENT, JULY 1, 1916,
TO JUNE 30, 1918.**

COUNTIES	Number Herds Tested	Number Cattle Tested	Number Healthy	Reactors	Suspects	Percentage of Diseased Cattle
Benton	1	1	1			
Chelan	2	10		10		00.00%
Clarke	23	373	354	19		5.09%
Cowlitz	7	220	212	8		3.64%
Douglas	1	2		2		100.00%
Franklin	1	14	13	1		7.14%
Grant	6	114	96	17	1	14.91%
Grays Harbor	4	104	96	8		7.69%
Island	8	155	142	13		8.39%
Jefferson	8	82	70	12		14.63%
King	631	7,723	7,304	399	20	5.17%
Kitsap	5	86	74	11	1	12.79%
Kittitas	11	692	570	119	3	17.19%
Klickitat	1	6	3	3		50.00%
Okanogan	2	6				
Pend Oreille	1	2	2			
Pierce	60	337	349	35	2	4.06%
San Juan	1	1		1		100.00%
Skagit	20	261	223	35	3	13.41%
Snohomish	25	453	331	67	5	14.79%
Spokane	18	332	343	19		2.20%
Stevens	2	11	11			
Thurston	2	6	5	1		16.67%
Wahkiakum	2	249	225	24		9.64%
Whatcom	24	331	329	50	2	13.12%
Whitman	2	35	35			
Yakima	8	63	50	13		20.63%
Totals	376	12,799	11,804	363	37	6.79%

TUBERCULOSIS-FREE ACCREDITED HERDS.

At a meeting of the United States Livestock Sanitary Association, held in Chicago, December 3, 4, 5, 1917, uniform methods and rules for tuberculosis-free accredited herds of pure-bred cattle were unanimously adopted by the association and representatives of pure-bred cattle breeders' associations, and were approved by the United States Bureau of Animal Industry. The work had been carried on in this state by the department, as outlined in the second biennial report. Following the adoption of uniform rules by the states and federal government, the Bureau of Animal Industry took up the work in this state in co-operation with the department. Many of our pure-bred breeders have taken advantage of the provisions of the agreement and have subjected their herds to inspection and test. A copy of this agreement is appended herewith:

Whereas, The Bureau of Animal Industry of the United States Department of Agriculture and the Washington State Department of Agriculture, for the purpose of improving the pure-bred dairy and beef breeds of cattle in the United States, encouraging recognition of the importance of maintaining herds of such cattle free from tuberculosis, and promoting the interchange of healthy pure-bred cattle, proposes, so far as available funds permit, to co-operate with the breeders of pure-bred cattle, by assisting them to eradicate tuberculosis from their herds and to maintain officially tuberculosis-free accredited herds.

Now, Therefore, In consideration of receiving assistance from the Bureau of Animal Industry and the Washington State Department of Agriculture along the lines and for the purposes specified, I, ...

do hereby agree to co-operate with the said bureau and state officials upon the following terms:

1. I will permit my entire herd, or any cattle of my herd, to be examined and to be tuberculin tested or retested at such times as are considered necessary by the bureau and state officials.

2. I will cause all animals which show physical evidence of tuberculosis to be promptly slaughtered under the United States meat inspection regulations, and I will cause the carcasses of said animals to be disposed of according to the meat inspection regulations of the Bureau of Animal Industry and state laws, based upon the lesions found upon post-mortem inspection.

3. All animals which react to the tuberculin test, but which show no physical evidence of tuberculosis, shall be removed from the herd and shall be disposed of as recommended by the bureau or state officials.

4. It is agreed that quarantined reacting bulls may be used for breeding, provided they are held upon the staff, their sexual organs properly disinfected, and the cow restrained by some suitable method so as not unnecessarily to be exposed to tuberculosis from the bull or infected premises.

5. I will cause, in all cases where the milk or milk products from quarantined reacting cows are to be used for any purposes whatever, the said milk or products to be first submitted to pasteurization at not less than 150 degrees F. for not less than twenty minutes.

6. I will cause the calves from quarantined reacting cows to be removed from their mothers at birth, to be maintained upon premises free from infection with tuberculosis, and to be fed upon the milk of cows which have passed a satisfactory tuberculin test or upon the pasteurized milk of tuberculin reactors.

7. I will allow no cattle to be associated with my herd which have not passed a tuberculin test approved by the bureau or state officials. I will keep all new cattle separated from my herd pending the application of a tuberculin test by an inspector of the said bureau or state. I will notify the proper officials immediately, giving details of the identification, characteristics, and records of tuberculin tests of any cattle which may be added to my herd.

8. I will subject any premises contaminated by tuberculous animals, as indicated by a physical examination or a tuberculin test, to a thorough cleaning and disinfection, at my expense, under the direction or supervision of the bureau or state officials. I will comply with all reasonable sanitary measures and other recommendations for the control of tuberculosis.

The following uniform methods and rules for tuberculosis-free accredited herds of pure-bred cattle, having been adopted by all parties concerned, are entered as a part of this agreement:

1. A tuberculosis-free accredited pure-bred herd is one which has been tuberculin tested by the subcutaneous method, or any other test approved by the Bureau of Animal Industry, under the supervision of the Bureau of Animal Industry, or a regularly employed veterinary inspector of the state in which co-operative tuberculosis eradication work is being conducted jointly by the United States Department of Agriculture and the state. Further, it shall be a herd in which no animal affected with tuberculosis has been found upon two annual or three semi-annual tuberculin tests, as above described, and by physical examination.

2. The entire herd, or any cattle in the herd, shall be tuberculin tested or retested at such time as is considered necessary by the federal and state authorities.

3. No cattle shall be presented for the tuberculin test which have been injected with tuberculin within sixty days immediately preceding or which have at any time reacted to a tuberculin test.

4. No herd shall be classed as an accredited herd in which tuberculosis has been found by the application of the test, as referred to in paragraph 1, until such herd has been successfully subjected to two consecutive tests with tuberculin, applied at intervals of not less than six months, the first interval dating from the time of removal of the tuberculous animal from the herd.

5. Prior to each tuberculin test satisfactory evidence of the identity of the registered animals shall be presented to the inspector. Any grade cattle

maintained in the herd, or associated with animals of the herd, shall be identified by a tag or other marking satisfactory to the state and federal officials.

6. All removals of registered cattle from the herd, either by sale, death, or slaughter, shall be reported promptly to the said state or federal officials, giving the identification of the animal and, if sold, the name and address of the person to whom transferred. If the transfer is made from the accredited herd to another accredited herd, the shipment shall be made only in properly cleaned and disinfected cars. No cattle shall be allowed to associate with the herd which have not passed a tuberculin test approved by the state and federal officials.

7. All milk and other dairy products fed to calves shall be that produced by an accredited herd, or, if from outside or unknown sources, it shall be pasteurized by heating to not less than 150 degrees F. for not less than twenty minutes.

8. All reasonable sanitary measures and other recommendations by the state and federal authorities for the control of tuberculosis shall be complied with.

9. Cattle from an accredited herd may be shipped interstate, by certificate obtained from the office of the state livestock sanitary officials of the state in which the herd is located or from the office of the Bureau of Animal Industry, without further tuberculin test for a period of one year, subject to the rules and regulations of the state of destination.

10. Strict compliance with these methods and rules shall entitle the owners of tuberculosis-free herds to a certificate, "Tuberculosis-Free Accredited Herd," to be issued by the Bureau of Animal Industry and the state livestock sanitary authority. Said certificate shall be good for one year from date of test unless revoked at an earlier date.

11. Failure on the part of owners to comply with the letter or spirit of these methods and rules shall be considered sufficient cause for immediate cancellation of co-operation with them by the state and federal officials.

My herd is composed as listed below:

Breed.....	Pure-Bred	Grade	Total
Females over six months old.....			
Males over six months old.....			
Calves under six months old.....			
In witness whereof I have signed this agreement this.....day			
of....., one thousand nine hundred and.....			
....., Owner.			
Address.....			

Witness:

List of Washington herds officially accredited as free from tuberculosis and of herds that have passed successfully one test with a view to certification:

Name and Address	Once Tested Without Reactors		Accredited	
	Pure-bred	Grade	Pure-bred	Grade
AYRSHIRE.				
E. M. Chandler, Yakima.....	7	..	..	..
GUERNSEY.				
A. L. Gile, Chinook.....	..	..	50	60
HOLSTEIN-FRIESIANS.				
A. Benson, Lynden.....	25	..	..	..
Carnation Stock Farm, Seattle.....	350	..	..	..
Charles Peabody, Seattle.....	90	..	..	..
A. E. Smith, Sumas.....	100	..	..	..
Byron A. West, Mount Vernon.....	17	..	..	..

The above names are copied from List No. 1 of the tuberculosis eradication division, Bureau of Animal Industry, issued July 1, 1918. This list does not comprise the total number of tuberculosis-free herds of the state. It merely names those herds which have been tested under the co-operative agreement and have passed one or more tests without reactors.

GLANDERS.

Glanders continues to be reported from time to time, particularly from that portion of the state lying east of the Columbia River. The disease is usually found in its most virulent form where large numbers of horses are kept. This condition exists in the wheat belt of the state, and as a general mallein testing campaign has never been conducted, there are centers of infection scattered throughout that region.

Mallein, which is used in the diagnosis of this disease, is supplied to this department by the United States Bureau of Animal Industry. This division distributes it without charge to the practitioners of the state. The opthalmic test has been used during the past few years, as this method has been found more reliable than the old subcutaneous method and is much easier of execution than the subcutaneous, especially when applied to unbroken range horses.

Following the testing of horses for this disease, it has been the policy to immediately destroy the reactors. Wherever doubt as to the correctness of the test exists, samples of blood serum of the suspected horse are forwarded to the pathological division, United States Bureau of Animal Industry, Washington, D. C., where a complement fixation test is made and the final diagnosis sent this office.

Cleaning and disinfection of the premises are carried out under the supervision of the veterinary inspector. Contact animals are traced and the test applied.

The slaughter of many of the reacting horses often works a hardship on the farmer. This is especially true when the animals are being used during the planting and cropping seasons. In some cases it has been deemed advisable to quarantine the farm and allow the owner the use of apparently healthy horses until arrangements could be made to replace the diseased horses. A frequent complaint from horse raisers is brought about because no indemnity is allowed owners of destroyed glandered stock, while the cattle owner receives compensation for slaughtered tubercular bovine animals. It would appear that indemnity could be allowed in these cases, as it undoubtedly would have the effect of bringing about a more prompt disposal of diseased animals. This would mean that in some instances time and money now being spent on these cases would be saved.

Glanders is a serious problem in the marketing of horses. During the past two years the federal government has been purchasing horses throughout the country, but due to outbreaks of this malady in many of the remount stations, unusual precautions are now being taken to buy horses from districts in which the disease is not known to occur.

Following is a summary of the work done by the department during the biennium; also the report of cases handled since that time:

HORSES TESTED FOR GLANDERS, JULY 1, 1916, TO JUNE 30, 1918.

COUNTIES	Number Herds Tested	Number Healthy	Number Diseased	Number Suspects	Number Slaughtered	Percentage of Reactors
Adams.....	55	55				
Benton.....	1	1				
Clarke.....	1	1				
Columbia.....	102	96	4	2	4	3.92%
Cowlitz.....	1		1		1	100.00%
Douglas.....	3	3				
Garfield.....	36	31	5		5	13.89%
Grant.....	240	230	10		10	4.16%
Grays Harbor.....	26	20	6		6	23.04%
King.....	22	21	1		1	4.55%
Lewis.....	3	2	1		1	33.33%
Lincoln.....	135	135				
Okanogan.....	12	11	1		1	8.33%
Pierce.....	5	1	3	1	4	60.00%
Shoshone.....	1	1				
Spokane.....	1	1				
Stevens.....	12	12				
Walla Walla.....	430	430	36	5	41	7.50%
Whitman.....	1		1		1	100.00%
Whitman.....	307	293	23	1	24	7.49%
Yakima.....	1		1		1	100.00%
Totals.....	1,445	1,343	93	9	100	6.44%

HORSES TESTED FOR GLANDERS, JULY 1, 1918, TO OCTOBER 1, 1918.

COUNTIES	Number Tested	Number Healthy	Number Diseased	Number Suspects	Number Slaughtered	Percentage of Reactors
Garfield.....	78	73	5		5	6.41%
Stevens.....	24	21	3		3	12.50%
Totals.....	102	94	8		8	7.84%

Horses Tested for Glanders.

Years	Animals Tested and Examined	Animals Reacting and Destroyed
1895-1896	138	15
1896-1898	34	20
1898-1900	58	46
1900-1902	156	41
1902-1904	238	24
1904-1906	967	107
1907-1908	1407	131
1909-1910	1698	255
1913-1914	1810	28
1915-1916	1234	114
1917-1918	1445	93

From July 1, 1916, to June 30, 1918, there were received from the United States Bureau of Animal Industry 8,300 doses of mallein, which have been distributed to the local veterinarians of the state.

During the period covered by the dates July 1, 1918, and November 1, 1918, there were 1,500 additional doses received and distributed.

HOG CHOLERA.

Hog cholera is the most serious disease of swine within the state. The germ which produces this disease has never been isolated, but it is known that the excretions and blood of infected swine are highly contagious and for this reason it is desirable to remove at once all well animals from those showing symptoms of disease and to have all hogs treated immediately with anti-hog cholera serum.

The losses from this disease during the first year of the biennium were light, but during the summer of 1918 there appeared to be an increase in virulence and a general spread of the disease throughout the state. Washington does not maintain an anti-hog cholera serum plant, but a contract has been made with one of the biological manufacturing firms to supply this department with anti-hog cholera serum at the rate of 1½ cents per cubic centimeter. To secure the benefits of this rate, the serum must be secured by a veterinarian who is approved by this department.

One of the accessory causes of this disease is the transportation of swine through infected stockyards. This should be borne in mind by all intending purchasers. A regulation of this department requires that hogs, which have been received from other states, having passed in transit through public stockyards, shall be held in quarantine for at least three weeks at destination.

Upon receiving a report of hog cholera, an investigation is made and if the disease is found to be present, a quarantine is issued, the owner is advised regarding the care of his animals and measures are instituted to clean up the premises.

The interest which the local practicing veterinarians have taken in this work has been conducive to much good and has in many cases resulted in the conservation of much valuable food for the nation.

*Doses of serum and virus recommended:

DOSES OF SERUM.

<i>Weight of Swine</i>		<i>Dose of Serum</i>
20 to 40 pounds	30	cubic centimeters
40 to 60 pounds	30 to 40	cubic centimeters
60 to 90 pounds	40 to 50	cubic centimeters
90 to 120 pounds	50 to 60	cubic centimeters
120 to 150 pounds	60 to 70	cubic centimeters
150 to 180 pounds	70 to 80	cubic centimeters
180 pounds and over	80 to 100	cubic centimeters

DOSES OF VIRUS.

<i>Weight of Swine</i>	<i>Dose of Virus</i>
20 to 40 pounds	1 cubic centimeter
Over 40 pounds	2 cubic centimeters

RABIES OR HYDROPHOBIA.

A conservative estimate of the livestock losses from this disease for the past three years is placed at \$100,000.00.

Since the last report of this department was written, there has been a change in our laws relative to the quarantine measures affecting this disease. The legislative measures enacted during the session of 1917 are appended, but it has been found that the local authorities do not in most instances enforce the quarantine.

*Amendment 3 to Bureau Animal Industry Order 245, effective January 2, 1918.

Heads of animals suspected of being affected with rabies have been sent to the Washington State Board of Health, Seattle, and to the veterinary department of the Washington State College, where examination has been made to determine the presence of negri bodies. These bodies when found in the nerve cells in sections of the central nervous system are diagnostic of the disease.

We are appreciative of the courtesies and help extended to us by these laboratories.

Rabies has been eradicated from many of the European countries by strict dog muzzling regulations. It is reasonable to presume that it could be held in control in this state by the enforcement of the same rules. We have, however, the coyote problem to contend with in Washington, and this factor must always be considered.

In a letter received from E. F. Averill, predatory animal inspector, United States Bureau of Biological Survey, the following information is given:

"According to the best information obtainable the outbreak of rabies among wild animals started either in Asotin County, Washington, or in Nez Perce County, Idaho, in 1910. In any event, the first rabid coyote of which we have any record appeared in Asotin County late in the fall of that year. Apparently it crossed into Wallowa County, Oregon, without spreading the disease in Washington. From the northwestern corner of Oregon it spread by means of domestic and wild animals in fan-shape until the entire Eastern Oregon and Southern Idaho section was affected. From these states it spread rapidly into California, Nevada and Utah.

It was not until the late summer or early fall of 1916 that any authentic reports of rabies were received from the State of Washington. Apparently the disease had been re-introduced into that state from Oregon by sheep dogs that accompanied flocks trailed across the state to the summer range in the national forests in Northern Washington, or by Indian dogs which accompanied their masters from the Umatilla reservation in Oregon to the Indian celebrations on the Yakima reservation in Washington early in the summer.

Though the disease has been prevalent in Oregon for a greater length of time than in any of the other western states, the heaviest losses have probably occurred in Nevada. Oregon's losses since the beginning of the outbreak have been variously estimated at from \$200,000.00 to \$1,000,000.00, while Nevada's loss for the winter and spring of 1915-16 is estimated at a half million."

The present methods of dog control are unsatisfactory. Aside from the rabies question, the wandering dog is the greatest menace to the farm production of wool and mutton and the development of this phase of the livestock industry. For these reasons there is need for a state or federal law licensing dogs.

Following are the law and the quarantines concerning the control of rabies promulgated by the Commissioner during the past biennium:

Be It Enacted by the Legislature of the State of Washington:

Section 1. That section 3204 of Remington & Ballinger's Annotated Codes and Statutes of Washington be amended to read as follows:

Section 3204. Quarantine shall mean the placing and restraining of any animal or animals by the owners or agents in charge of them within certain enclosures described or designated by the commissioner of agriculture, the assistant commissioner of agriculture assigned to the division of dairy and livestock or any inspector of the Department of Agriculture, in writing, and if the quarantine shall be for the purpose of preventing the spread of rabies or hydrophobia, the notice shall be published in the official newspaper of the county or counties included in the quarantined area or if there be no such newspaper then in one newspaper circulating generally within such area, and

said notice shall contain a warning to the owners of dogs within the quarantined area to confine closely or to muzzle all such dogs to effectually prevent biting, and any dog found running at large in such quarantined area at any time after five days from the date of the publication of such notice or known to have been removed from or to have escaped from such area, not being muzzled as aforesaid, may be shot or otherwise destroyed, by any person without liability therefor.

Any owner or owners or agent who fails to comply with or wilfully violates or negligently allows such quarantine to be violated by the escape and running at large of quarantined animals shall be guilty of a misdemeanor.

Sec. 2. This act is necessary for the immediate preservation of the public peace, health and safety and shall take effect immediately.

Passed the Senate, January 25, 1917.

Passed the House, February 7, 1917.

Approved by the Governor, February 10, 1917.

Order No. 9.

STATE OF WASHINGTON.
DEPARTMENT OF AGRICULTURE.

To Whom It May Concern:

Whereas, The infectious disease rabies or hydrophobia has appeared in this state and is spreading with alarming rapidity, a proper safeguarding of the lives of the public demand that every effort be made to immediately check the progress of the dread disease fatal alike to livestock and human beings. As this infection is spread almost entirely by the bite of rabid dogs, it becomes of the utmost importance that every dog not closely confined be provided with and caused to wear at all times a muzzle of durable and safe construction until such time as the Commissioner of Agriculture is convinced that the danger is over.

NOTICE OF QUARANTINE.

The fact has been determined and notice is hereby given that a contagious, communicable disease, known as rabies or hydrophobia, exists in the State of Washington;

Now, Therefore, I, H. T. Graves, Acting Commissioner of Agriculture, under authority conferred by chapter 13, Laws of 1917, do hereby quarantine the entire counties of Spokane, Pend Oreille, Whitman, Garfield, Asotin, Columbia, Walla Walla, Franklin, Adams, Lincoln, Ferry, Stevens, Okanogan, Chelan, Douglas, Grant, Benton, Kittitas, Klickitat, and Yakima, and establish the following rules and regulations:

1. All dogs running at large within the boundaries of the counties herein specified shall be properly and securely muzzled so as to prevent their biting other dogs or animals.

Provided, That this rule shall not apply to dogs under leash or securely confined on the premises of their owner.

3. No dogs shall be transported or moved from the territory hereinbefore quarantined to any point outside the quarantined area unless permission has first been secured from the Commissioner or his authorized agent.

PENALTY.

Any owner, owners or agents who wilfully violate or negligently allow this quarantine or these rules and regulations to be violated shall be guilty of a misdemeanor and be punished by a fine of not more than two hundred fifty dollars (\$250.00), or be imprisoned in the county jail for not more than ninety (90) days.

Peace officers, under the provisions of section 5, chapter 100, Laws of 1915, are requested to assist in the enforcement of said quarantine rules and regulations, and any person is authorized under the provisions of chapter 13, Laws

of 1917, to destroy, without liability therefor, any dog not muzzled as herein provided and found running at large in the herein defined areas.

H. T. GRAVES,

Acting Commissioner of Agriculture.

Dated February 19, 1917.

Effective five days after date of publication.

Amendment No. 1 to Department of Agriculture Order No. 9, Modifying Quarantine Area.

(Effective July 9, 1917.)

The fact has been determined that the infectious disease known as rabies or hydrophobia, does not now exist in the counties of Walla Walla, Garfield, Columbia and Asotin, all being south of the Snake River.

Now, Therefore, I, E. F. Benson, Commissioner of Agriculture, under authority of law do hereby remove all quarantine restrictions heretofore placed upon said counties in the State of Washington, by the Department of Agriculture's Order No. 9, dated February 19th, 1917.

The effect of this order is to permit dogs in this area to go unmuzzled.

This amendment does not affect any part of the state east of the summit of the Cascade Mountains and north of Snake River, all of which area is still under Quarantine Order No. 9.

E. F. BENSON,

Commissioner of Agriculture.

Amendment No. 2 to Washington Department Order No. 9 releasing rabies quarantined areas. Effective August 30, 1917.

The fact has been determined by the Commissioner of Agriculture that the disease of rabies or hydrophobia is not now known to exist or exists to a slight extent only, in the State of Washington and especially in those counties of the State of Washington lying east of the Cascade Mountains and north of the Snake River, quarantined by Department Order No. 9, dated February 19, 1917, and effective five days after date of publication.

Now, Therefore, I, E. F. Benson, Commissioner of Agriculture, do release from quarantine the counties of Spokane, Pend Oreille, Whitman, Franklin, Adams, Lincoln, Ferry, Stevens, Okanogan, Chelan, Douglas, Grant, Benton, Kittitas, Klickitat and Yakima.

This amendment rescinds Order No. 9, and permits dogs in this area to go unmuzzled.

(Signed) E. F. BENSON,

Commissioner of Agriculture.

Order No. 10.

STATE OF WASHINGTON.

DEPARTMENT OF AGRICULTURE.

To Whom It May Concern:

Whereas, The infectious disease rabies or hydrophobia has appeared at various places in the counties of Kittitas, Yakima and Benton, in the State of Washington, and a proper safeguarding of the lives of the public demands that every effort be made to immediately check the progress of the dread disease, fatal alike to livestock and human beings. As this infection is spread almost entirely by the bite of rabid dogs, it becomes of the utmost importance that every dog not closely confined be provided with and caused to wear at all times a muzzle of durable and safe construction until such time as the Commissioner of Agriculture is convinced the danger is over.

NOTICE OF QUARANTINE.

The fact has been determined and notice is hereby given that a contagious, communicable disease, known as rabies or hydrophobia, exists in the State of Washington;

Now, Therefore, I, E. F. Benson, Commissioner of Agriculture of the State of Washington, under authority conferred by chapter 13, Laws of 1917, of the

State of Washington, do hereby quarantine the entire counties of Kittitas, Yakima and Benton, in said State of Washington, and establish the following

RULES AND REGULATIONS.

1. All dogs running at large within the boundaries of the counties herein specified shall be properly and securely muzzled so as to prevent their biting other dogs or animals.

2. No dogs shall be transported or moved from the territory hereinbefore quarantined to any point outside the quarantined area unless permission has first been secured from the Commissioner of Agriculture, or his authorized agent.

PENALTY.

Any owner, owners or agents who wilfully violate or negligently allow this quarantine or these rules and regulations to be violated shall be guilty of a misdemeanor and be punished by a fine of not more than two hundred fifty dollars (\$250.00), or be imprisoned in the county jail for not more than ninety (90) days.

Peace officers, under the provisions of section 5, chapter 100, Laws of 1915, are requested to assist in the enforcement of said quarantine rules and regulations, and any person is authorized under the provisions of chapter 13, Laws of 1917, to destroy, without liability therefor, any dog not muzzled as herein provided and found running at large in the herein defined areas.

E. F. BENSON,
Commissioner of Agriculture.

Dated November 27, 1917.

Order No. 11.

STATE OF WASHINGTON. DEPARTMENT OF AGRICULTURE.

NOTICE OF QUARANTINE.

The fact has been determined and notice is hereby given that a contagious, communicable disease, known as rabies or hydrophobia, exists in the County of Franklin, in the State of Washington;

Now, Therefore, I, E. F. Benson, Commissioner of Agriculture of the State of Washington, under authority conferred by chapter 13, Laws of 1917, of the State of Washington, do hereby quarantine the entire area of Franklin County, in said State of Washington, and establish the following

RULES AND REGULATIONS.

1. All dogs running at large within the boundaries of Franklin County, Washington, shall be properly and securely muzzled so as to prevent their biting other dogs or animals.

2. No dogs shall be transported or moved from the territory hereinbefore quarantined to any point outside the quarantined area unless permission has first been secured from the Commissioner of Agriculture, or his authorized agents.

PENALTY.

Any owner, owners or agents who wilfully violate or negligently allow this quarantine or these rules and regulations to be violated shall be guilty of a misdemeanor and be punished by a fine of not more than two hundred fifty dollars (\$250.00), or be imprisoned in the county jail for not more than ninety (90) days.

Peace officers, under the provisions of section 5, chapter 100, Laws of 1915, are requested to assist in the enforcement of said quarantine rules and regulations, and any person is authorized under the provisions of chapter 13, Laws of 1917, to destroy, without liability therefor, any dog not muzzled as herein provided and found running at large in the herein defined areas, to-wit: Franklin County, Washington.

E. F. BENSON,
Commissioner of Agriculture.

Dated January 28, 1918.

FORAGE POISONING.

From time to time reports have been received that horses in the Walla Walla section had been dying from a strange malady. Dr. J. H. Martin of this department accordingly visited that district and, in company with Dr. J. W. Woods, made a field investigation of this disease. Following is his report:

Olympia, Washington, February 20, 1917.

Commissioner of Agriculture,
Olympia, Washington.

Dear Sir: Following instructions received from your office, I have made as full and complete an investigation of the outbreak of the peculiar disease in horses located in Walla Walla County as circumstances and apparatus would permit. This disease has been present in Walla Walla County several times during the past twelve or fifteen years, but perhaps did not appear on so many ranches as during the present outbreak; hence did not attract so much attention. This disease attacks both horses and mules, and may also prove fatal to cattle; however, but little evidence was secured indicating that fatalities had occurred among the cattle. I found this disease more or less prevalent on several of the ranches in the Dry Creek vicinity, and near Pleasant View, all in Walla Walla County. The fatalities numbered from two to fifteen head of horses on each ranch; but I did not think that all the fatalities were due to this particular disease—some having died from other causes.

The first cases of this disease have usually been observed during the late fall months, or early winter, and may be found throughout the winter season, or until the animals have been removed from the grain stubble, or from the straw stacks, upon which they have been subsisting. Occasionally cases of this disease may appear within a period of two or perhaps three weeks after the animals have been removed.

SYMPTOMS.

1. The symptoms are not uniform in the different cases, but the general appearance and line of symptoms follow in typical cases.

2. The first changed condition usually noticed is one of drowsiness, or dullness, when at rest; the head hanging and eyes almost or entirely closed.

3. The movement of the animal is unsteady, or irregular, showing wabbling gait.

4. This condition is often followed by restlessness, moving across the corral, or field, and then circling around, returning to same place—usually with a very unsteady gait, sometimes excited, not observing obstacles, as wire, or wire fences which may be in the path.

5. Usually among the first symptoms will be noticed a pinkish or reddish urine when voided changing in a few hours to a very deep red, then after one or two days becoming very dark or dark brown.

6. In more advanced stages the muscles of the face are drawn, with a jerking of the head and body muscles, and the lips are drawn apart.

7. Sometimes there is feed or straw in the mouth being partly chewed, or masticated, apparently forgetting to swallow.

8. The animal will stand with the legs bracing his body, and will lean against the fence, or against the stall if in the barn.

These are the most common symptoms; occasionally others are observed, and continued from one-half day to several days—sometimes a week or more before the animal dies. I am of the opinion that these animals show symptoms, probably of a nervous character, before any of these characteristic symptoms are shown, and it is only after considerable development of the disease process that anyone observes the condition signifying that there is something wrong with the animal.

POST-MORTEM FINDINGS.

The blood shows dark venous in appearance; there being no real red blood from the arteries, showing that the red corpuscles have been more or less destroyed—that is decomposed. The blood may have almost a tarry appearance, and is very slow to clot or coagulate; in some cases may not show any clot at all. The alimentary tract shows very little change that is noticeable to the unaided eye. The liver will show a bluish black color somewhat hardened and enlarged; the spleen is very dark, almost black, showing a hardened and leathery appearance; the kidneys show very dark red, the outer layer almost black.

CURE AND PREVENTION.

At the present time there is no known medicine or drug which may be administered giving any satisfactory results, after the animals have developed typical symptoms of the attack; hence the administration of drugs is not to be considered in connection with the disease.

The control of the disease lies in preventing the animals from consuming unwholesome forage. This unwholesome forage is found in the vicinity where this disease was present, consisting of straw, tar weed, and mustard, and some grain, which had been made wet or damp some weeks earlier. This forage contained quantities of mold and fungous growths found chiefly on the straw and chaff. The molds and fungi which causes this trouble are produced on the straw, weeds, grasses and grains only when the weather or climatic conditions are favorable for their growth. This growth will always occur during the continuance of a damp, sultry, atmosphere, and also if there have been rains, melting snows, followed by fairly warm days, during the autumn season. No serious trouble can arise in feeding this quality of forage, if it has not been exposed to this character of dampness, rains, or snows; hence it may be observed that an animal may subsist on this combination of feed when it does not contain these molds and fungous growths. It is evident that the best method of combating this disease lies in prevention. Moldy, improperly cured, fermented or damaged feed should not be given to horses, and a complete change of feed is of paramount importance if several of the symptoms are noticed as above enumerated.

Yours respectfully,

J. H. MARTIN,

State Veterinary Inspector.

CONTAGIOUS ABORTION.

(Bang's Bacilli Infection.)

Abortion disease is of first importance in this state. Large financial losses are suffered year after year. Although the disease has been the subject of much investigational work and the causative agent is known, we appear to be no nearer a solution of a rational method of effective treatment than before.

As the disease is of a chronic character and appears to be self-limiting, establishing an immunity, owners of cattle affected with this disease have been advised to retain the aborting animals in their herds, provided they are worthy of retention and otherwise appear to be healthy. Adding cattle from outside sources often adds fuel to the flames. The animals that have gone through the abortive period are much more liable to produce a strong living calf than susceptible cows which have not established an immunity.

In referring to immunity in this disease it should be kept in mind that the term is relative only. As far as present knowledge goes, it may be said that there is no absolute method of curing the disease or producing immunity. Carbolic acid, methylene blue, serums, bacterins and vaccines have been more or less popular at different times, but the department does not feel that the

success attained by the use of any of these agents is sufficient to warrant its recommendation by us. The sequelae, or morbid condition left after abortion may, and most often does, deserve the attention of a trained veterinarian. The most common of these complications are retained afterbirth, metritis and sterility. Animals affected with these conditions are often sold to the unsuspecting buyer who thereby introduces the disease into his own herd. It is plain that some regulatory control measures should be instituted, but the disease is so widespread, so chronic and insidious in character, that it is doubtful if a method of sanitary control can be placed in operation at this time. In lieu of a proper supervision over sales of cattle, it is respectfully suggested that there is need for a law requiring the seller of cattle to provide the buyer with a health certificate. Such a law would restrict the trading and sale of diseased bovine animals.

HEMORRHAGIC SEPTICEMIA.

This disease has been recognized in the state for many years, but during the period covered by this biennium has not given us much concern except in a few instances. Practically all of the cases found can be traced to shipments from public stockyards. In each case reported to the department, immunization treatment by the use of biologicals has been recommended as medicinal treatment has been found to be of little value. Young stock (cattle) appear to be most susceptible, but in some instances sheep have also been affected.

ACTINOMYCOSIS OR LUMP JAW.

A number of these cases are reported from time to time. Owners are advised to treat the affected animals or have them slaughtered under proper inspection.

BLACKLEG.

Black leg remains endemic in this state, and outbreaks of the disease are often reported. The important treatment is of a prophylactic nature. Every owner of susceptible livestock should keep them vaccinated.

During this biennium 17,950 doses of black leg vaccine have been distributed to veterinarians and cattle owners.

ANTHRAX.

Anthrax has been suspected in Skagit and King counties. Reports from specimens submitted to laboratories in Seattle indicate that an organism resembling bacillus anthracis has been found, but the diagnosis has not been confirmed by animal inoculations. This is a disease that may at some future time cause much livestock losses in our cattle districts, especially in overflowed and swamp land.

SHEEP SCAB.

In handling this troublesome disease we have enjoyed the co-operation of the United States Bureau of Animal Industry. Scabies of sheep has been becoming more prevalent throughout the west during the past two years, until there is reason to look with suspicion on all shipments of sheep from districts outside of the state.

Scab first made its re-appearance in the feed yards of the Union Meat Company at Lyle, Klickitat County. Since that time there have been sporadic outbreaks, as will be seen by a reference to the appended table.

The laws relating to the interstate movement of sheep provide that they shall be inspected by the state veterinarian after coming into the state. It is to be hoped that the force of veterinarians may be increased to the end that our present sheep laws may be enforced. It is doubtful if entire dependence can be placed on the inspection of lay county inspectors, and for that reason alone there is need for trained veterinary sanitarians of this department, who will supervise this class of work in their districts.

Sheep scab is one of the oldest known animal diseases. It is caused by the mite *psoroptes ovis*, which measures about 1-50 of an inch in length. These mites borrow into the skin, producing an irritation which causes the sheep to become restless. To relieve this irritation they rub, scratch and bite themselves. As the disease progresses scabs form and the wool falls out; finally the general condition of the sheep becomes affected; they become unthrifty and, if the disease is allowed to progress unhampered, death follows. These scab mites readily become transferred from one sheep to another. They work so insidiously that many more sheep are affected before the infestation is suspected.

Treatment is directed toward the destruction of the scab mite. When this is accomplished the disease is cured. This department recognizes certain proprietary dips used in the treatment of scab, which have the approval of the Bureau of Animal Industry. All "exposed" sheep are dipped once and "diseased" sheep are dipped twice, under the supervision of veterinarians of this department, or the bureau, or both. During the biennium 81,391 sheep were dipped for this disease, 48,000 being dipped twice.

Sheep scab is the greatest disease menace to the wool-growing industry, and at all times deserves our close attention. The sheep interests of the state, valued at about \$10,000,000.00, are entitled to protection. We are doing our utmost with the means at our command, but should we be visited by an epidemic of sheep scab, which would necessitate a general dipping and quarantine order for all sheep within the state, it would be wise to have an emergency fund on hand.

When sheep scab was discovered in Okanogan County in October, 1918, the following order was issued:

Order No. 12.

STATE OF WASHINGTON.
DEPARTMENT OF AGRICULTURE.
DIVISION OF DAIRY AND LIVESTOCK.

The fact has been determined, and notice is hereby given, that the contagious disease known as sheep scabies is now known to exist in Okanogan County.

Now, Therefore, I, E. F. Benson, Commissioner of Agriculture, under authority conferred on me by law, do hereby issue the following order, to-wit:

1. All sheep which are, or have been, exposed to the disease of sheep scabies shall be dipped once under the supervision of a veterinary inspector of the Department of Agriculture, or a veterinary inspector of the United States Bureau of Animal Industry, in a dip approved by the said Bureau of Animal Industry.

2. All sheep which are now affected with, or have originated from a flock in which scabies is known to exist, shall be dipped twice in a dip approved by the United States Bureau of Animal Industry, and such dipping shall be supervised by veterinary inspectors of this department or of the Bureau of Animal Industry.

3. All stockyards and stock cars in which sheep known to be affected with scabies have been quartered shall be cleaned and disinfected in a manner approved by the veterinary inspector in charge of this work, before again being used for the quartering or transportation of livestock.

4. For the purpose of this order all sheep which have been trailed, herded, driven or otherwise moved over the designated driveways of the Okanogan National Forest shall be considered exposed to the disease known as sheep scabies.

Done at Olympia, Washington, this 7th day of October, 1918.

E. F. BENSON,

Commissioner of Agriculture.

By R. J. DONOHUE,

Assistant Commissioner of Agriculture.

SCABIES IN SHEEP, SHOWING NUMBER AND LOCATION OF OUTBREAKS OF THIS DISEASE.

Date	Location	Owner Diseased Flocks	Reported by	Number Infected and Exposed	Origin of Infection
2-14-17	Lyle.....	Union Meat Co.....	E. O. Joss.....	11,259	Portland, Ora.
4-18-17	Vancouver.....	W. W. McBride.....	A. O. Brown.....	411	Oregon
5- 2-17	Seattle.....	{Stacy St. Stock Yards. {Barton & Co.....	J. Madsen.....	3,000	Unknown
9-22-17	Woodland.....	W. W. McBride.....	E. O. Joss.....	231	Unknown
2-22-18	Lyle.....	Union Meat Co.....	E. O. Joss.....	9,982	Unknown
7-27-18	Okanogan Forest	E. S. Hubbard.....	P. T. Harris.....	30,000	Oregon (?)
6-27-18	Richland.....	E. S. Hubbard.....	L. O. Pelton.....	150	Oregon
10- 5-18	Okanogan Forest	{W. W. Hopkins..... {Yakima Sheep Co..... {Dipper Sheep Co..... Albert Treiber..... Archie Prior..... Robert Prior..... Thomas Drumheller.... Allan Drumheller.....	L. O. Pelton.....	58,000	Hubbard Sheep on Forest Driveway
9-15-18	Pateros.....	Peter K. Jess.....	W. O. Dye.....	19	Hubbard Sheep at Pateros
9-15-18	Pateros.....	Oscar Miller.....		52	
9-16-18	Carlton.....	M. Chapman.....		5	
9- 8-18	Twisp.....	S. T. Miller.....		10	
10-15-18	Colville Indian Reservation.....	{W. T. Albritton..... {R. R. Glasco..... {O. F. Flower.....	J. H. Martin.....	1,648	Hubbard Sheep

OTHER DISEASES.

In addition to the diseases of livestock hereinbefore noted, there are many diseases reported to the department which, upon investigation, prove to be due to some cause other than infection or contagion.

While we do not care to handle work which should be done by the private veterinary practitioners of the state, we find it is often advisable that we investigate such conditions wherever practicable, although we have not thought it to be our duty to treat such cases. If such treatment were carried out by us the department would be placed in the position of handling general veterinary practice—something we do not feel it our duty to do—and although

there may be complaints made in cases where we refuse assistance, we feel that such complaints are unwarranted. This department should not render service for the individual, unless by so doing the public welfare is protected.

ACKNOWLEDGMENT.

It is felt that much credit for the general health of the livestock of the state is due to the veterinarians who are in private practice. These men have shown at all times a willingness to co-operate with and aid the department in the control and eradication of livestock diseases. We acknowledge our appreciation.

Respectfully submitted,

R. J. DONOHUE,

Chief, Division of Dairy and Livestock.

WASHINGTON STATE BOARD OF VETERINARY MEDICAL EXAMINERS.

E. F. Benson, Olympia, Commissioner of Agriculture, Ex Officio President of the board.

Dr. J. T. Seely, 1101 Westlake Avenue, North, Seattle.

Dr. W. D. Garratt, prior to November, 1918, Puyallup.

Dr. Robert Prior, subsequent to November, 1918, Yakima, Wash.

Under the veterinary practice act passed by the legislature of 1907 a provision was made for a board of veterinary medical examiners, consisting of a president, secretary, and treasurer.

The function of the board is to examine applicants who desire to practice their profession in the State of Washington. The examination embraces the following subjects: Anatomy, Physiology, Histology, Bacteriology, Surgery, Hygiene, Sanitation, Practice of Medicine, Contagious Diseases, Obstetrics and Parasitology.

The object is to increase the efficiency of the veterinary profession within the state by licensing practitioners who have the necessary learning and who are capable of administering to the wants of the livestock industry in an intelligent and conscientious manner; to obstruct the working of empirics and imposters who prey upon the uninformed, rendering a service, in many instances based upon fallacy and really harmful, for it imbues the unsuspecting stockman with a sense of security when in reality he is in danger of serious financial loss.

The appropriation for the maintenance of this board is \$1,000.00 for the biennium, but due to the fact that the expenditures are limited to the income, it is in reality self-sustaining.

The following is a complete list of all graduate veterinarians licensed to practice in the State of Washington:

Name—	Last Known Address.
Ackley, C.....	Kelso
Badeley, J. C.....	Walla Walla
Bailey, J. Hess.....	Palouse
Baker, E. T.....	Moscow, Idaho
Baker, R. E.....	Wenatchee
Baynes, C.....	Tacoma
Beletski, T.....	Wasco, Ore.
Bigerell, G. W.....	Fairfield
Bestul, R. J.....	Grants Pass, Ore.
Booton, L. R.....	Tekoa
Bogart, E. A.....	Centralia
Boyles, R.....	Colton
Brown, D. W.....	Battleground

Name—	Last Known Address.
Brown, S. L.	Newburg, Ore.
Brown, L. A.	Oregon
Brown, O. S.	Edwall
Brown, A. C.	Vancouver
Bullivant, J.	Spokane
Button, R. A.	Tacoma
Button, A. I.	Kent
Button, O. G.	Tacoma
Buzard, A. E.	California
Calkins, F. P.	Michigan
Carstensen, C.	Davenport
Cassels, F. H.	British Columbia
Close, F. W.	Lewiston, Idaho
Clark, G. W.	Yakima
Clark, A. E.	Oakesdale
Clark, R. D.	Deceased
Cornwall, O. L.	Almira
Cozier, Carl.	Bellingham
Coppes, S. A.	Deceased
Coults, R.	Alaska
Cramer, E. J.	Kent
Crouse, A. E.	Rosalia
Cummings, B.	British Columbia
Craft, A. E.	Sunnyside
Damman, A. J.	Vancouver, B. C.
Dinse, A. J.	U. S. B. A. I. Texas
Dirstine, F. H.	Fullman
Donaghue, J. A.	Ritzville
Donohue, R. J.	Olympia
Doty, R. B.	Seattle
Drake, E. J.	South Dakota
Dunkan, G.	Deceased
Edmonds, E.	Mount Vernon
Ehner, E. H.	Sunnyside
Ella, F. C.	Spokane
Elliot, T.	Uniontown
Evans, E. I.	Hartline
Fast, G. B.	Ritzville
Ferguson, W.	Goldendale
Fehr, G.	Deceased
Fisher, A.	Georgetown
Fleming, R. J.	Palouse
Ford, J. A.	Sumas
Foster, S. B.	Portland, Ore.
Fullington, H. C.	Seattle
Pettridge, R.	Kent
Garratt, W. D.	Puyallup
Galbraith, A. R.	Garfield
Gibson, J. D.	British Columbia
Gilchrist, A. W.	Deceased
Gilliam, R. L.	Fairfield
Glaizer, W. V.	Tacoma
Glaizer, E. L.	Tillamook, Ore.
Glenn, V. D.	Montesano
Goin, J. W.	Goldendale
Graves, H. T.	Puyallup
Griesinger, Edwin.	Wilson Creek
Haggard, Finch.	Seattle
Hammond, W. L.	B. A. I.
Harrington, D.	Sunnyside
Hayes, W. J.	Creston
Habecker, I. N.	Oregon
Hadley, F. B.	Madison, Wis.
Hart, W. G.	Tulare, Cal.
Hartnagel, O.	Seattle
Hauschild, T. B.	Kennewick
Heldring, J. L.	Deceased
Hess, O. B.	Washington, D. C.
Hicklingbottom, R.	Seattle
Hicklingbottom, R. J.	Seattle
Hilton, J.	Seattle
Hjort, Carl.	Stanwood
Howard, J.	Stanwood
Howard, G. P.	St. Johns
Huff, L. B.	B. A. I., Iowa
Husband, A. F.	British Columbia
Hutchinson, E. N.	Lynden
Ickes, G. Z.	Palouse
Jackson, J. W.	Wenatchee
Jarvis, D. H.	Sandpoint, Idaho
Johnson, B.	Texas
Johnson, J. P.	Seattle

Name—	Last Known Address.
Johnson, Mark.....	Clarkston
Johnson, P. H.....	Colville
Johnson, W. J.....	Ethel
Jones, C.....	Yakima
Jones, G. A.....	Sedro Woolley
Kalkus, J. W.....	Pullman
Kellum, V. S.....	Seattle
Kennedy, E. D.....	Moscow, Idaho
Kennedy, H. F.....	Newport
Keown, H.....	Victoria
Knapp, H. S.....	Seattle
Kydd, W. H.....	Oregon
Knox, J. H.....	Waterville
Langdon, W. C.....	Fort Russell, Wyo.
LeMay, D.....	Fort Angeles
Lloyd, T. J.....	Ellensburg
Lull, F. C.....	British Columbia
MacIntosh, A. W.....	Yakima
Mackintosh, P.....	Spokane
Martin, J. H.....	Spokane
Mason, F. H.....	Utah
Mason, W. D.....	Pomeroy
Mast, R. P.....	Harrington
Mawhinney, H.....	Spokane
Menig, O.....	Twisp
Miller, S. T.....	Portland, Ore.
Miller, W. N.....	Puyallup
Mitten, James.....	McMinnville, Ore.
Murray, J.....	Corvallis, Ore.
McAllister, R. C.....	Everett
McBride, R.....	Colfax
McCoy, E. E.....	Colfax
McCoy, J. H.....	B. A. I., Portland
McCoy, M. M.....	Colfax
McKibbin, J. A.....	Espanola
Nelson, R. S.....	Pullman
Nelson, S. B.....	Oregon
Nevel, E. E.....	Deceased
Nief, F. A.....	Goldendale
Norman, C. T.....	Colfax
Nye, E. W.....	Mansfield
O'Donnel, M. J.....	Wilbur
Oderkirk, C. C.....	Seattle
Oliver, K. M.....	Seattle
Osado, T.....	B. A. I., Texas
Overhulse, G. F.....	Snohomish
Patric, L. A.....	Prosser
Paulman, V. C.....	Seattle
Pelton, L. C.....	Thorp
Pfenning, H. E.....	Mount Vernon
Phillips, C. S.....	Deceased
Phinney, J. A.....	California
Pickering, C. E.....	Vancouver, Wash.
Pickling, C. F.....	Spokane
Pike, F.....	Idaho
Powell, E. T.....	Yakima
Prior, Robt.....	Deceased
Ralston, W. E.....	Everson
Reeve, R. A.....	Toppenish
Richards, W. R.....	Blaine
Richmond, H. A.....	Seattle
Roberts, E. S.....	Spokane
Robillard, A. J.....	O'Brien
Rogers, E. K.....	Mansfield
Root, G. F.....	Colville
Ross, W. J.....	Davenport
Rothlisberger, L. H.....	Friday Harbor
Rude, A. E.....	Ferndale
Sandwith, C. J.....	Sunnyside
Saperstein, A.....	Seattle
Schader, C. H.....	Seattle
Schultz, C. H.....	Seattle
Seely, J. T.....	Deceased
Shaw, R. L.....	Wapato
Sheppard, G. F.....	Wapato
Sheppard, J. N.....	Seattle
Smith, F. E.....	Chehalis
Stewart, W. W.....	Toppenish
Stickney, L. G.....	Manhattan, Kan.
Stouder, R. W.....	Monroe
Strandberg, C. A.....	Spokane
Stratton, J. J.....	

Name—	Last Known Address.
Stuart, G. E.....	Spokane
Swingley, G. A.....	Seattle
Thompson, J. C.....	Pomeroy
Trippler, H. A.....	Walla Walla
Trotter, J. C.....	Rockford
Unbewust, G. A.....	Harrington
Unrau, G.....	Arlington
Weeks, H. S.....	Elma
Wegner, E. E.....	Pullman
Whitlow, E. T.....	
Wilson, W.....	Dayton
Woods, J. W.....	Walla Walla
Woodside, J. H.....	Redmond
Wright, C. C.....	Independence, Ore.
Yates, G.....	Seattle

DIVISION OF HORTICULTURE.

Honorable E. F. Benson,
Commissioner of Agriculture,
Olympia, Washington.

Dear Sir: In pursuance of the requirements of the horticultural code enacted by the 1915 session of the Washington state legislature, I herein submit to you a summary of the administration of the division by my predecessor and a report of the activities since my incumbency of the office as chief of the division, May 26, 1917.

The very efficient administration of the affairs of the division by Mr. T. O. Morrison was terminated by his resignation May 19, 1917, to accept a position with the Federal Land Bank at Spokane, Washington. No specific changes were made in the system of the work as carried on by Mr. Morrison.

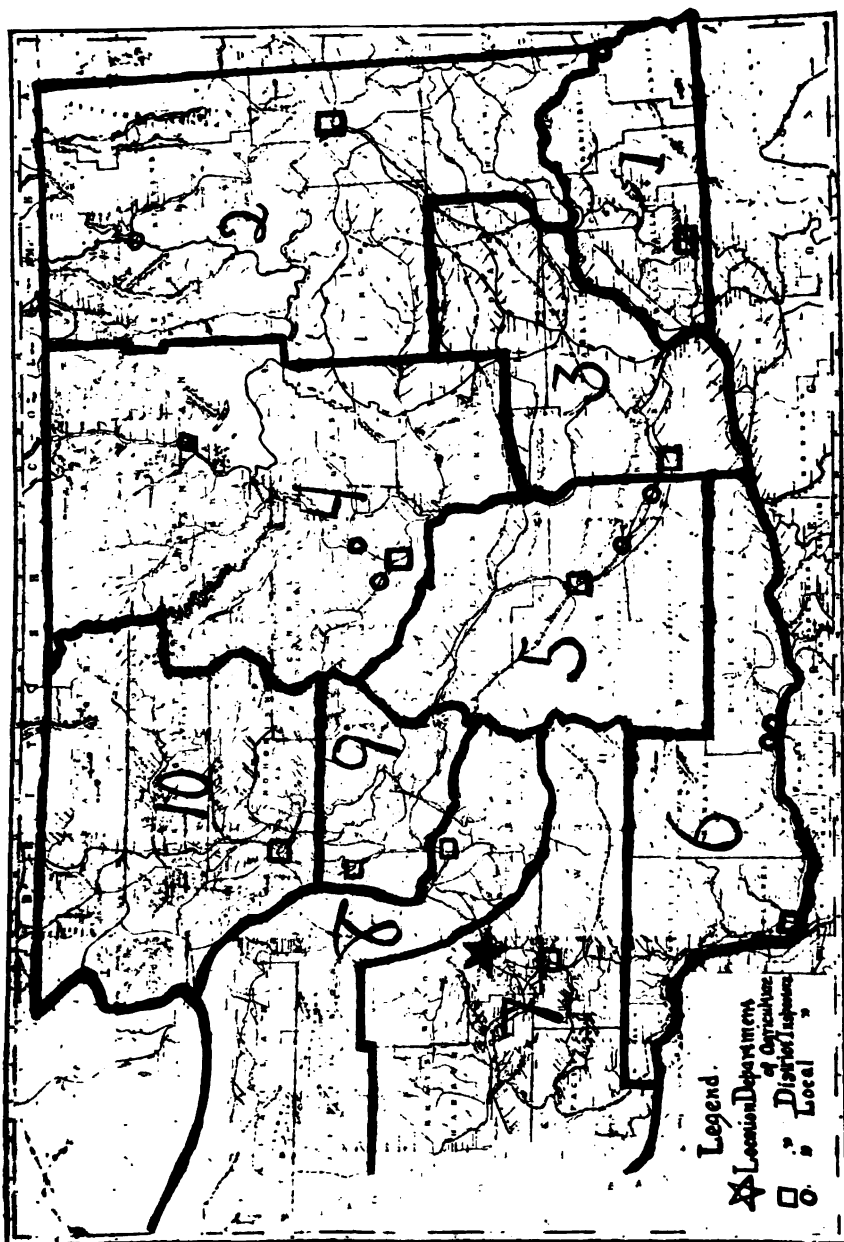
The work of the division is divided into several classes:

1. Orchard work.
Demonstrative and educational work for the best insect and disease control.
Crop estimates.
State census of orchards.
Police work.
Disinfection and cleanup work.
2. Inspection.
Inspection of nurseries, nursery stock and the issuing of licenses.
Inspection of imported nursery stock and disinfection, or condemnation if necessary.
Inspection of apples for grade and pack.
3. Inspection of fruit and vegetables.
4. Inspection of incoming potato shipments.
5. Co-operative work with the Federal Bureau of Markets, the State College of Agriculture, and the State Marketing Division recommending federal grades of potatoes, and the inspection of same.
6. Adoption of state standard grade and pack rules.
7. Enforcement of the state insecticide and fungicide law.

HORTICULTURAL DISTRICTS.

The state is divided into ten horticultural districts, each district having one "inspector-at-large" who is the district inspector.

District No. 1 comprises the counties of Asotin, Columbia, Garfield, and Walla Walla. Harry L. Miller is the district inspector, located at Walla Walla. The fruit interests are varied in this district. At Clarkston and some other points on the Snake River are to be found some of the most desirable conditions for the growing of sweet cherries of any place in the state. Bing, Lambert, and Royal Ann are the leading varieties. Peaches and prunes are also quite successfully grown in this territory. The growing of small fruit could be greatly increased in this district if market and transportation facilities were improved. The leading apples grown in this section are the Rome Beauty,



Delicious, and Jonathan. In the vicinity of Walla Walla is to be found the most extensive truck gardening interests of any section in the state, about 1,400 acres being devoted to the industry, onions ranking first in importance. Strawberries and other small fruits are grown in limited quantities in this territory. This section ranks second in the state from the standpoint of prune production. The Italian prune is second to apples in commercial importance. The leading varieties of apples grown in this section in the order of their prominence are Rome Beauty, Jonathan, Winesap, and Delicious. There are 532 acres of nuts in this district, more than half of which are in the Snake River territory.

District No. 2 comprises the counties of Ferry, Lincoln, Pend Oreille, Spokane, Stevens, and Whitman. The district inspector is E. B. Kelley, located at 503 Columbia Building, Spokane. District No. 2 is primarily an apple district, although some other of the tree fruits are grown with varied degrees of success. The one principal variety which predominates in this district is the Wagner; the largest planting being in the vicinity of Spokane. Rome Beauty is probably the next most popular variety. Strawberries are commercially grown in the vicinity of Spokane, but not in sufficient quantity to supply local demands. At Kettle Falls and some other points on the Columba River in Stevens and Lincoln counties the orchard interests are of some commercial importance. Climate and soil conditions are good, but lack of transportation facilities handicaps these sections.

District No. 3 comprises Adams, Benton, and Franklin counties. Luke Powell is district inspector, located at Prosser. In this district is to be found the most extensive strawberry growing interests of any section in the state. Kennewick is the principal shipping point. Many of the European grapes are successfully grown in Franklin and Benton counties. This district is also one of the important peach sections in the state. With apples the Winesap takes the lead, Jonathan, Delicious, and Rome Beauty following in the order enumerated. There are, of course, many other varieties grown. Pears, prunes, plums, and cherries are very successfully grown in some parts of the district.

District No. 4 includes Chelan, Douglas, Grant, and Okanogan counties. P. S. Darlington is district inspector, located at Wenatchee. This district is the one district in the state which stands out as a strictly specialized, commercial fruit section, the principal territory being tributary to the Wenatchee, Okanogan, and Columbia rivers. Apples predominate, the leading varieties being Winesap, Jonathan, Delicious, Spitz (Esopus), Stayman, and Rome Beauty, ranking in the order enumerated. There are, of course, many other varieties grown, but the enumerated ones are the principal commercial sorts. This district is a leader in the production of apricots and produces many sweet cherries, peaches, and pears, but does not produce enough small fruit to supply local markets.

District No. 5 comprises Yakima and Kittitas counties. C. B. Wood is district inspector, located at Yakima. The Yakima Valley has the largest general production of fruit of any district in the state, and probably the fruit interests are more diversified than in any other section, due to the range of elevation from the bench lands of the Cascade Mountains in Kittitas County to the level of the Columbia River. Approximately 45,000 acres of land in Yakima County alone is planted to orchard. There are about 3,200 orchards which show an average of about 15 acres per orchard. The recent orchard census

taken by the department shows that there are more than 750,000 Winesap trees in the county, and 500,000 Jonathan, Rome Beauty, Newtown, and Delicious, ranking in the order named. The largest tonnage of pears in the state is grown in Yakima County. There are more than 400,000 pear trees in the county. There are also more than 300,000 peach trees in this district, making it the largest peach producing section in the state. Sweet cherries and prunes are also grown in commercial quantities.

District No. 6 includes Clarke, Cowlitz, Klickitat, Skamania, and Wahkiakum counties. I. R. Fletcher is the district inspector located at Vancouver. In this district is to be found the principal prune producing sections in the state. Clarke and Skamania counties probably produce more prunes than are grown in the balance of the state. There are 258 driers in the district, having a daily capacity of 1,151 tons. In Klickitat County, in the vicinity of White Salmon and Underwood in Skamania County is to be found some very desirable apple sections. The Newtowns, Spitz (Esopus), and Delicious are the leading varieties. In this district almonds, filberts, English and American walnuts, and chestnuts are successfully grown in commercial quantities. In Clarke County figs are grown near Vancouver.

District No. 7 includes Grays Harbor, Lewis, Mason, Pacific, and Thurston counties. E. F. Perry is the district inspector, located at Chehalis. In this district is located Pacific and Grays Harbor counties, in which is to be found the principal cranberry interests of the state. The cranberry is indigenous in many places in Western Washington, but the leading commercial development of cranberry growing has been in Pacific and Grays Harbor counties. Cranberries grow wild in Massachusetts, New Jersey, Maine, New York, Michigan, Minnesota, Wisconsin, Washington, and a few other states.

In 1830 the cranberry became a cultivated commercial product in Lincoln, Mass. In 1845 it became a commercial enterprise in New Jersey. New York, Michigan, and Wisconsin supplied the markets with the berries from the wild bogs for many years, but today there are many acres of cultivated bogs to be found in these states.

In Western Washington the development of cultivated cranberry bogs started about 1880 and today in Pacific and Grays Harbor counties are to be found about 1,000 acres of bogs, 600 of which are in a good state of productiveness. In Pacific County the 1918 crop from about 400 acres is 40,000 boxes, about 40 pounds each, the capacity of the box being one-third of a commercial cranberry barrel. Present market prices range from \$4.00 to \$5.00 per box, which makes it a promising industry where conditions are favorable.

In the other counties of the district pears and small fruits are successfully grown when given good attention. In this district the wild blackberry grows profusely in the cut-over timber lands and is gathered in large quantities for canning factories. The local demand and canning factories consume the output from this territory.

District No. 8 includes Clallam, Jefferson, Kitsap, Pierce, and San Juan counties. Henry Huff is the district inspector, located at Sumner. In Pierce County is to be found the most important bush fruit growing section in the state, while the other counties produce limited quantities of the tree fruits, the surplus of which is consumed by the extensive canning plants located at Puyallup and Sumner. Grapes are grown very successfully in this district on some

of the islands located in the Sound. Probably more different varieties of apples and pears are grown in this district than any other part of the state.

District No. 9 is King County. F. N. Rhodes is the district inspector. He is located at 420 City-County Building, Seattle. Pears do especially well in many places in this district. Apples adapted to the coast conditions are grown successfully in many parts of the district. The Yellow Transparent, Duchess, Wealthy, Gravenstein, King, and Northern Spy are the most popular. Some of the islands in this district have been noted for the production of high grade fruit since the inception of fruit growing in the Northwest.

District No. 10 includes Skagit, Snohomish, and Whatcom counties. J. C. Eakle is district inspector. He is located at Seattle with Mr. Rhodes because the counties of that district have failed to make provision for an office in the district; hence he spends a part of the time assisting Mr. Rhodes and the balance in his district with headquarters at Bellingham. The commissioners of Snohomish County have recently made an appropriation for horticultural work and headquarters for this district will probably be transferred to Everett.

COUNTY INSPECTORS.

The provisions of the horticultural law are such that it is the duty of the commissioners of each county to levy an assessment upon the taxable property of their county to defray all expenses incurred for orchard inspection and other horticultural activities within the county. The appropriations in the different counties range from \$500.00 to nearly \$15,000.00. In the principal fruit valleys the number of local county inspectors is controlled by the size of the county appropriation, varying in number according to the horticultural activities in the different seasons of the year. The list of counties making appropriations for horticultural work is as follows:

Asotin
Chelan
Clallam
Clark
Columbia

Douglas
Garfield
Grays Harbor
King
Klickitat

Lewis
Mason
Okanogan
Pierce
Skamania

Snohomish
Spokane
Stevens
Walla Walla
Yakima

ORCHARD WORK.

The work in connection with the orchards is mainly in the nature of general inspection, watching for any outbreak of new diseases or insects or evidence of increased activity of the already present pests. This work naturally divides itself into educational work and police duties. The orchards of the state constitute, in the aggregate, such an immense area it becomes impossible for the district inspectors to give as close attention to each orchard as is necessary to secure the best results. Upon the discovery of any new pests or an increased activity of any of the old ones the owner is at once given information and demonstrations, if necessary, as to the best methods of treatment.

In the extensive commercial centers there is an increased demand for instruction of this kind, and the best trained horticulturists are needed for the work. Where the county appropriations are sufficient the inspection force is increased so that the orchards are given more attention by the local inspectors.

In the orchard work many meetings are held where problems pertaining to pruning, orchard care, and pest control are freely discussed. It has been the policy of the division for several years to each year test new spray materials and work out methods of their application, strength of mixtures, and the

proper time to apply them to get the best results. Spraying charts have been issued and generally distributed among fruit and vegetable growers, giving instructions as to when spraying for the different insects and diseases should be done, and what solutions should be used. Vegetable gardening is becoming a prominent enterprise in some parts of the state and much information on the control of the garden pests is given out.

EXPERIMENTAL WORK.

Through the courtesy of Mr. F. A. Frazier of the Niagara Spray Company, Niagara, N. Y., a dusting machine, together with a quantity of dusting material, was furnished to H. L. Miller of Walla Walla to be used for the control of aphids on the vegetable garden crops in that section. Where the dust was applied soon enough after infestation the results were very satisfactory.

The greater amount of the systematic experimental work done by the division was carried on by H. E. Waterbury of Yakima in the fifth district. The county commissioners of this county make such appropriations for horticultural work in the county that it enables the work to be done. Mr. Waterbury succeeded Mr. F. E. De Sellem, who resigned in May to accept a position with the Federal Bureau of Markets.

We quote from his annual report for Yakima County as follows:

Although experimental work is not mentioned in the horticultural laws of the State of Washington as a definite function of the horticultural inspectors, there are so many problems to be solved in the handling of which the State College has been unable to give assistance that, for the past three years, the inspector located at Yakima has done some work along this line with favorable and encouraging results. The work was begun in a small way, but has developed until it has become a considerable part of the local department program. Aside from the unquestioned need for such work there has been a real demand for it. If an experiment station should be located in the Yakima Valley in the near future, and there is little doubt that it will be, much of the work which we have taken upon ourselves will be taken over by it. Until that time, however, it seems advisable and even necessary to devote some time toward deciding the more important and perplexing problems to the best of our ability.

Heretofore the most comprehensive experiments have been those relating to codlin moth control. As a universal trouble maker, the codlin moth is without a peer, and it was felt that if even a slight advance could be made in control measures it would be of sufficient value to the fruit industry to compensate for the expense of any investigations which we would be able to make.

In 1916 the entire experimental tract in the Congdon orchards was devoted to codlin moth work exclusively, and in 1917 the greater part of the work was also along the lines of codlin moth control. In 1916, although no criticism could be made of the facilities placed at our disposal, nor with the splendid co-operation extended by the management of the Congdon orchards, there was, strange to say, one serious difficulty. The orchard surrounding the experimental plot was too clean, that is, the infection in that locality was not severe enough to make the test of the various materials a difficult one. This statement is supported by the counts made on the check plot which produced 80 per cent clean fruit with no spraying at all. To make the results more conclusive it was felt that plots should be selected in the lower valley where, on account of climatic conditions and the age of the orchards, the infestation is more severe. In addition it was decided that inasmuch as the codlin moth is not our only pest, part of the expenditure should be made in experimenting with control measures for some of the other pests and diseases. For this reason plans were made for experimenting with sprays for the powdery mildew and woolly aphids as well.

The codlin moth work was a continuation of the work done in 1916, and the points on which information was desired were as follows:

1. The relative efficiency of various strengths of arsenate of lead.
2. The relative efficiency of arsenate of lead paste, powdered lead arsenate, calcium arsenate, and nicotine sulphate.
3. The relative importance of spraying at different times during the season.
4. The relative efficiency of varying strengths of nicotine sulphate.
5. A comparison of arsenate of lead and distillate oil emulsion vs. nicotine sulphate with reference to the effect on both codlin moth and aphids.

Three experimental tracts were selected in the lower valley, the first containing approximately nine acres in the E. W. Ross orchard at Buena, the second containing approximately four acres in the orchard of R. B. McLeod in the Orchardvale district, three miles below Zillah, and the third, containing about one and one-half acres in H. C. Gest's orchard between Sunnyside and Emerald. The first tract consisted of trees ten years old of four varieties—Jonathan, Spitzenberg, Newtown and Winesap; in the second the trees are fifteen years old and of six varieties—Jonathan, Winesap, Newtown, Rome Beauty, Arkansas Black, and Stayman; in the third the trees are about twenty-five years old, and in the tract selected for the work all are Spitzenbergs. All these orchards have had a great deal of trouble with codlin moth. In the Gest orchard the writer has taken from a single band over 200 larvae at one time. While the other two orchards are not so badly infested, there is no doubt that codlin moth are present in sufficient quantities to make thorough and continuous spraying a necessity.

While all the codlin moth work was carried on below Union Gap because of the reasons given above, it was decided to locate the woolly aphid control work in the upper valley, not because the infestation there was any greater than in the lower valley, but because it is a more important economic problem in the upper valley than the codlin moth and the growers were more interested in it. For experimental purposes a plot containing 96 apple trees was selected in the orchard of S. B. Shiley in the Lower Naches. The varieties were Winesap, Jonathan, Winter Banana, and Delicious. The treatments planned were for the control of the root form of the woolly aphid as well as the aerial form.

It seems, however, that it was a mistaken enthusiasm which prompted us to locate our experimental tracts so far apart. The chief interest centered in the codlin moth experimental work, both on account of the larger and more elaborate schedule of experiments mapped out, and also because it was a continuation of previous work. Therefore, the woolly aphid experiments were neglected from time to time and much data which, without doubt, would be of value was lost. The changes in personnel of the experimental force, already referred to, which took the writer temporarily into private work and his successor into the army, left no one who was acquainted with the work, from its inception, and no one has had the opportunity to make continuous observations throughout the season. The result is that our conclusions are a patchwork of the observations of several different men, and any information published is necessarily a generalization.

For the experiments on powdery mildew we were fortunate in securing a plot containing 240 trees located in a Black Ben Davis orchard, belonging to S. M. McKee of Selah. This orchard had been very badly infected with mildew in 1916, many hundred boxes of apples being degraded or lost altogether. The effect on the fruit had been more marked than any heretofore observed in the Yakima Valley, as frequently from 25 to 75 per cent of the skin of the apple was roughened and russeted, giving it an appearance similar to frost injury. Unfortunately, what has been said of the woolly aphid experiments is also true to a less extent of powdery mildew experiments. Certain information was obtained which, we feel is of great value, and a start has been made which may lead to more important results another season.

In the spring of 1917, at the request of Mr. F. A. Frazier of the Niagara Sprayer Company, plans were made to try out the dust sprays which have been

attracting so much attention in the East and some parts of the West. The request came so late that it was impossible to incorporate this experiment with others in the lower valley, so the work was carried on in a small orchard inside the city limits of Yakima.

Codlin Moth Experimental Work in Ross Orchard.

Early in the season this tract was selected and divided into twenty-two plots, the varieties being divided as evenly as possible so that each plot had at least two varieties and most of them three. Each tree was tagged with a linen tag showing number of the tree and plot letter, and blue prints were made of the entire tract to avoid confusion among the men employed on the work. To avoid prejudice count trees were selected early in the season before any spraying was done, and during the season a record was kept of all thinnings and windfalls as well as of the harvested fruit. Out of a total of 530 trees on the entire tract, 114, or 21½ per cent, were selected as count trees, a larger percentage than is usually selected, and every apple from these count trees was picked, sorted, and counted under the direct supervision of the horticultural office. In sixteen of the twenty-two plots count trees were selected in such a way as to locate them at least fifty feet from any other plot with another row of trees intervening, making it almost impossible for spray which might be blown from another plot to affect them.

In the check plots which remained unsprayed throughout the season there was considerable variation. In the one adjoining the county road, where the dust was deep, the fruit was thickly coated with dust throughout the season and 40.96 per cent clean fruit was produced. The varieties on this plot were Winesap, Jonathan, and Yellow Newtown. In the other check plot which was composed entirely of Spitzenbergs, there was only 6.4 per cent clean fruit. This plot, however, was not exposed to the dust like the other check plot and so did not receive that protection.

The results of the spraying on the other plots was not at all satisfactory from the standpoint of clean fruit. Without doubt the greatest mistake was made when all of the plots were allowed to go unsprayed from the 23d of July to the 21st of August. At this time tens of thousands of worms were hatching and from the results of observations made, we are convinced that the greatest damage occurred between the 8th and the 21st of August. This is a lesson in itself, as it proves what should have been realized before, namely, that in the lower valley, where infestation is severe, the fruit cannot be kept clean if allowed to go unsprayed for nearly a month at that time of year. The lesson is even plainer to this particular case, for all the spraying done by the department was done by experienced men and was as thorough and painstaking as it could possibly be.

So far as these results have bearing on the experimental tests, the heavy infestation was a benefit rather than a detriment, for a clean orchard, as we have pointed out before, does not afford a satisfactory test of the efficiency of any spray. Whereas a serious infestation, like that encountered in this experiment, does give the experimenter a right to draw conclusions.

It will be noted that in our summary we have made a distinction between worms and stings. While we have taken into consideration the fact that any apple in any way damaged by codlin moth larvae has not received adequate protection, at the same time it must be admitted that the apple has received some protection and retains a commercial value, although it may be a diminished value. It is also of interest to note whether the proportion of stings will decrease as the proportion of worms decreases. In 1916, where the proportion of wormy apples ranged from 6 to 8 per cent, the proportion of stings was less than 1 per cent. In 1917, where the proportion of worms was 8 per cent, the proportion of stings was from 17 to 19 per cent.

Paste Arsenate of Lead—One Pound to Fifty Gallons of Water vs. Two Pounds to Fifty Gallons vs. Four Pounds to Fifty Gallons.

The results here appear to confirm the results obtained a year ago. In Plots A, B, C, and E we have basis for an excellent comparison. From the tabulated results it is clear that one pound of paste lead to fifty gallons of water is not sufficient to control codlin moth. Two pounds to fifty gallons shows about 20 per cent more clean fruit and, in turn four pounds to fifty gallons shows about 10 per cent more clean fruit than two pounds to fifty gallons, and 30 per cent more clean fruit than one pound to fifty gallons. However, the results on Plot E indicate that four pounds to fifty gallons is not necessary throughout the season, but that the beneficial results of the stronger solution are gained in the later applications. On Plot E, where two pounds to fifty gallons was used for the first three sprays and four pounds to fifty gallons for the last two, the results are very slightly inferior to those on Plot C where four pounds to fifty gallons was used throughout. For several years complaints have been made by growers in the Yakima Valley, particularly in the lower valley, that the codlin moth did most of its damage in the latter part of the summer. They also complained that at that season the lead seemed to have little effect on the young worms, even when the apples appeared to be coated. Their complaints were supported by the evidence, as many orchards which have had less than 1 per cent infection on August 1st have developed from 10 per cent to 50 per cent infection after that date, in spite of repeated spraying. We do not believe that the worms have in these instances eaten the poison and escaped death, even though only two pounds to fifty gallons were used. We do believe, however, that when the weaker solutions are used a thinner coating is left on the apples, a coating in which crevices appear more quickly, thus offering an entrance to the worm too minute to be apparent to the naked eye but plenty large enough for the tiny larvae. We hope to carry this test farther, as it promises to be one of the most important bits of information discovered in our work.

Relative Importance of Sprays Applied at Different Times During the Season.

We believed at the outset that no results of value would be obtained by applying only the calyx spray. Consequently this experiment was omitted. At the beginning of the season five sprays were the limit assigned to any one plot. Later in the season the program was changed slightly and six sprayings of lead made on one plot and seven on another. The results of the additional sprays did not appear in any marked degree to justify their application, although one additional spray, making six in all, would have been justified had it been applied early in August during the period already referred to as the period of heaviest infestation. While Plot T, with 82.52 per cent clean fruit, shows a much higher proportion of clean fruit than Plot B, for example, this must be discounted to a certain extent because Plot T, like one of the check plots, was located where the dust from the road had an opportunity to coat the apples heavily. On Plot K, where the dust was not a factor, there was only 6.7 per cent more clean fruit than on Plot B, which received two applications less.

On Plot J the calyx spray was omitted and five sprays applied afterwards. It will be noted that the percentage of calyx worms was high, 7.9 per cent, the percentage of side worms being 22.25 per cent. However, this plot had 5.65 per cent more sound fruit than Plot I, in which the third spray, often termed the "first intermediate spray," was omitted, four other sprays being applied. Any attempt to carry the deductions farther brings confusion, and we can only say that if we are to depend upon the results of these experiments as a guide, we would hesitate to omit any spraying in this district. Different results might be obtained where the infestation is light, but we are now dealing with a district where there is a continuous succession or, perhaps, procession, of worms from the time of the first hatch until cold weather sets in. The only safe method would be to apply the calyx spray, the first brood spray, the first intermediate spray, the second brood spray, and at least one, and possibly two, additional sprays at intervals of about fourteen to eighteen days, depending on

temperature and the way in which the young worms are hatching. After the second brood spray it would be necessary to make very careful observations.

Powdered Lead Arsenate.

Powdered lead arsenate justified its increased popularity. In our 1916 report we prophesied that the dry arsenate sales would increase very materially during the coming year. That they would make a gain of 1000 per cent was beyond belief, but by consulting our report on sales of spray material it will be seen that they did. While we have been glad to recommend the dry lead because of its better storage qualities and the greater ease with which it is handled in the field, we did not attempt to attribute to it any other qualities which would give it preference over the paste lead. However, our results not only in the Ross orchard, but in other experiments as well, indicate that the dry lead is more effective as a deterrent to the codlin moth. This is very evidently not due to any chemical differences, but is due, we think, to the fact that the powder stays in suspension better, not so much in the spray tank, where the artificial agitation should keep any lead in fair suspension, but after it has reached the fruit and foliage. This would give a more even coating. We have never taken much stock in complaints that certain brands of lead are chemically sub-standard, but we have believed, and still do believe, that there is a difference in the efficiency of leads, sometimes a very considerable difference, due entirely to their physical texture. If one pound of powdered lead equals two pounds of paste lead, the results on Plots B and D should be equal, providing always that all other contributing factors are equal. The tables show, however, that the powdered lead on Plot D produced over 14 per cent more clean fruit than the paste lead of equivalent strength, on Plot B. We do not wish to display any unwarranted enthusiasm for the powdered lead, but in addition to our own results we have already received the unsolicited testimony of over a score of growers. We would also call attention to observations made during the season which showed that the powdered lead was leaving a more even and a more readily discernible coating on the fruit than the paste.

Nicotine Sulphate.

More interest has been awakened by the experiments with nicotine sulphate for codlin moth control than by any other experimental work yet done in the Yakima Valley. This work was begun by Mr. F. E. DeSelle, then district horticulturist, in 1915, and was continued on a much larger scale in 1916 by Mr. DeSelle and Mr. J. C. Folger. In 1915 the work was carried on in a badly infested orchard and the results were better with nicotine than with arsenate of lead. Only four trees were sprayed with nicotine, however, and the solution used, 1 to 400 for three of the sprays, was very strong. In 1916 the schedule was much more elaborate, the results being given in our Annual Report for 1916. In 1916 the principal argument in favor of nicotine in preference to the lead was that it not only controlled the codlin moth as effectively as any spray used, but also controlled the woolly aphids, which were very numerous in the orchard. This virtually classified it as a dual purpose spray. It was felt that if nicotine sulphate could be used as a dual purpose spray its value to the growers would be greatly increased, as it might be possible to save considerable expense when spraying for aphids and codlin moth together by omitting the lead arsenate which is customarily combined with the nicotine.

In the Congdon experimental plot the nicotine, as noted, was as effective against codlin moth as the lead, but it was no more effective, and in addition it is more expensive. However, the weakest solution of nicotine used in the Congdon orchard experiments was 1 to 1,024, so that we felt that if nicotine could be used at weaker strengths, 1 to 1,600, for example, or 1 to 2,132, the expense differential would be largely eliminated. For this reason our tests for 1917 were planned to compare varying strengths of nicotine sulphate, ranging from 1 to 800 to 1 to 2,132.

Unfortunately, the results at Buena do not corroborate last year's conclusions. Out of eight plots sprayed with nicotine sulphate solutions, only one, Plot S, produced as much clean fruit as Plot B, which was sprayed with ar-

senate of lead paste, two pounds to 50 gallons of water. All of the other nicotine plots, including Plot M, which was sprayed with a 1 to 800 solution, produced less clean fruit. To make the contrast even more marked, all but one of the nicotine plots received one more spray than Plot B, which should have given the nicotine some advantage even though it might have been only a slight one. The weakest solution, 1 to 2,132, used on Plot P, was the least satisfactory, only 18.4 per cent clean fruit being produced. The best results, as noted, were on Plot S, where a 1 to 1,024 solution was used with lime paste. The only conclusion that we can reach under the circumstances is that the nicotine under lower valley conditions is not as effective against codlin moth as arsenate of lead.

If the effect of the nicotine on the moth or larva is a paralysis of the nerve centers, caused by the volatile fumes, as suggested last year, it may be that its effectiveness is dissipated shortly after the application. To carry our hypothesis farther, if this is the case, it might prove effective for a few days against the worms but be valueless against a continued attack such as we invariably encounter in the lower valley.

We do not present these results as a conclusive argument against nicotine. The evidence to date is conflicting and the work should be carried on for another year at least. However, we must state frankly that our only conclusions are not very favorable to nicotine sulphate as a codlin moth control where infestation is heavy.

A report has just come to us that experiments recently carried on in Oregon by Prof. A. L. Lovett of the Oregon Agricultural College indicate that nicotine sulphate has a very definite value as an ovicide. Our information is that in the experiment the check, or untreated eggs, showed 20 per cent mortality, the eggs sprayed with nicotine sulphate 1 to 1,200, 84 per cent mortality, and the eggs treated with the same strength of nicotine sulphate, plus fish oil soap, 100 per cent mortality. These results, which have been verified, add to our explanation another very logical interpretation of the success of nicotine in lightly infested orchards and its non-success in a badly infested orchard where oviposition extended over a long period of time, a small percentage of the eggs only being present on the dates when the nicotine sprays were applied.

Calcium Arsenate.

Calcium arsenate is an arsenical spray which contains greater killing power than arsenate of lead. It has been looked upon with some suspicion because of its liability to scorch the fruit and foliage. A year ago it was used with excellent success and with scarcely any damage to the trees. Last year two different brands were used, the Rex brand at Buena and the Latimer brand in the McLeod orchard in Orchardvale. One pound to fifty gallons of water, as used in Plot G for five sprays, produced results superior to those on most of the other plots in so far as fruit free from infestation was concerned. The effect on the fruit and foliage, however, was unsatisfactory. Foliage burning was noted about the middle of July and by picking time a considerable proportion of the leaves had fallen and a burned area around the stems of some of the apples was noticeable. There was also a larger percentage of windfalls than on the plots sprayed with arsenate of lead or nicotine, this doubtless being due to burning of the stems. On Plot F, where calcium arsenate was used for the last two sprays only, the damage was much less than on G and H, where it was used throughout the season. On Plot H, where one-half pound of calcium arsenate to fifty gallons of water was used, the results were unsatisfactory from every standpoint, the infestation being nearly 30 per cent greater than on Plot G and the burning about the same. We believe, however, that the burning was in part due to the condition of the orchard, which was allowed to become very dry during the summer. This theory is supported by the results in the McLeod orchard, where the damage from burning was not so severe. The latter orchard was in vigorous growing condition throughout the season. We would not advise growers, at the present time, to use calcium arsenate in lieu of lead arsenate, excepting in an experimental way.

Distillate Oil Emulsion as a Control for Red Spider.

One other test was made in the Ross orchard which was not planned at the beginning of the season. During the summer many of the trees, particularly on the plots sprayed with nicotine, became very badly infested with red spider. A large percentage of the leaves dropped prematurely and the condition was serious. Finally distillate oil emulsion, at the rate of one and one-half gallons to 100 gallons of water, was applied and on the trees sprayed the spider was annihilated with a single spray. In many cases the trees put out new leaves. On the unsprayed trees the red spider remained for the balance of the summer. There was no burning caused by the distillate oil emulsion nor any other injury noticeable. This is of particular interest, as nicotine sulphate has been recommended by some authorities as a control for red spider. We have been convinced by work done in former years that it is ineffective in the Yakima Valley, and our experience this year appears to clinch the argument, as the trees sprayed six times with nicotine proved to be the worst infested trees. It is only fair to note that the Kentucky Tobacco Product Company, the manufacturers of the best known brand of nicotine sulphate, have never to our knowledge recommended their product for red spider control.

Powdery Mildew Experiments.

The tract selected in the McKee orchard on Selah Heights was subdivided into six plots, five of them spray plots and one an unsprayed check plot. As the greatest damage in this orchard in 1916 occurred on the fruit, counts were made at picking time and notations made of the percentage of clean fruit and of fruit showing mildew netting. Notations were also made during the growing season as to the condition of the foliage and twigs, particularly at the terminals. That the mildew was not controlled by climatic conditions is evident from the results on Plot A, the check plot, which produced only 5 per cent clean fruit and showed considerable mildew on all the terminals. The best results were obtained with three applications of iron sulphide on Plot E, but Plot C, which received three applications of atomic sulphur, was not very far behind. Where only two applications of iron sulphide or atomic sulphur were used, the results were much inferior. On Plot F, where atomic sulphur was used in combination with lime sulphur, some of the results were very good, all in all a little better than the same number of sprays with atomic sulphur or iron sulphide alone. It might be noted that the reason for using this combination was that in cool weather atomic sulphur sometimes proves ineffective, as it does not volatilize readily in cool weather. It was thought that the addition of a three-quarters degree solution of lime sulphur might cause more rapid volatilization. The results indicate that there may have been some slight advantage, though the difference is more marked on the fruit than on the foliage and twigs.

The conclusions that we would draw from our work on mildew are that the expense of a third spraying is justified by the results, at any rate in an orchard where the infection is pronounced. Moreover, the iron sulphide appears to be slightly more effective than the atomic sulphur and is also cheaper. We would also point out again that the climatic conditions in 1917 were much less favorable to mildew than in 1916 and there was less damage, as a rule, even in unsprayed orchards. In a normal or abnormally moist season, repeated sprayings would count even more.

During the coming season a product new to this valley, known as milled sulphur, will be on the market. This material is reported to have given good results in California and is recommended by Ballard and Volck, who carried on extensive experiments in mildew control in the Pajaro Valley. This will give us three materials which can be used with prospects of good success in the control of mildew.

Potato Experimental Work.

During the season of 1916, and to a lesser extent in 1915, also, considerable trouble was experienced by the growers with various potato diseases. Because of the interest aroused and urged by a number of growers, the horticultural de-

partment obtained permission from the Board of County Commissioners to establish two experimental plots, one at Sunnyside and the other near Toppenish, Washington, on the Yakima Indian reservation. Old alfalfa ground was procured for both plots. In anticipation of this work several potato fields were visited at harvest time in the fall of 1916 and some 750 pounds of tubers were carefully selected from these fields to be used for seed. Potatoes were also purchased and shipped in from other states and from other parts of this state, some being from irrigated and others from non-irrigated sections.

The purpose of the experiments were as follows:

1. To discover how best to reduce the amount of fusarium wilt and rhizoctonia, thereby increasing the yield and storage qualities.
2. To find if it is necessary to plant imported seed in order to produce maximum crops and, if so, which is preferable, irrigated or non-irrigated seed.
3. Whether it is possible to grow high quality seed on non-irrigated land in the Yakima Valley.
4. Whether it is possible to grow first quality seed under irrigation by late planting.

The results of these experiments, while not as satisfactory as was hoped for, are, at any rate, a step in the right direction.

To answer the first question, eleven different lots of potatoes infected with rhizoctonia were treated with corrosive sublimate solutions of different strengths for varying lengths of time. Before planting, the stem end was cut from the tubers and where a trace of fusarium was found further cuts were made until the potato appeared clean, the knife being disinfected before the last cut. In spite of this precaution a large percentage of the crop showed fusarium. In the results it was notable that at a ratio of one-fourth of a pound of corrosive sublimate to thirty gallons of water, seed treated from one to one and one-half hours produced results fully as satisfactory as those obtained when the seed was treated two hours or with a stronger solution.

On account of water getting into the plot at Toppenish and flooding the ground which was conducive to common scab on all plantings except the July planting, results there were not as satisfactory as they might have been. Canada Burbanks infected with powdery scab, which had been planted in the plot showed common scab, but no trace of powdery scab. One of these lots, treated with formaldehyde, one pint to thirty gallons of water, showed no signs of scab. Another lot treated with corrosive sublimate one-fourth of a pound to thirty gallons of water was also free from scab.

To answer the second, third, and fourth questions, seed was obtained from several sources. Seed was obtained from one farmer near Sunnyside from potatoes planted June 28, 1916, other seed from the same locality from a farmer who planted July 1, 1916. These two lots were planted in the experimental plots next to seed which had been shipped direct from Minnesota and the home-grown seed produced equally good yields with a smaller percentage of fusarium wilt and rhizoctonia. Seed was also obtained grown without irrigation from early plantings in the Rattlesnake Hills, north of Sunnyside, and this was planted beside imported Minnesota seed. The yield was quite similar, but there was fully as much infection in the home-grown seed as in the imported seed. However, non-irrigated seed from Oregon produced much more satisfactory yields than from irrigated districts.

Seed from Minnesota and other non-irrigated sections and late planted seed from the Yakima Valley showed equal vigor, rows of these showing across the fields before other potatoes were up.

It was also noted that seed planted fifteen inches apart in the row yielded more than that planted thirteen inches or eleven inches, and that planted thirteen inches apart more than that planted eleven inches.

A part of the Sunnyside plot was planted July 7th and a part of the Toppenish plot July 11th and 12th. Before frost killed the vines, all hills in each plot of late planting that appeared to be free from disease were marked by stakes and dug separately and the smooth potatoes true to type were selected and stored for seed. This seed should prove much superior for experimental

work in 1918 than any we were able to obtain this year. However, so many potatoes of the July planting failed to come up that it is a question whether a good stand can be obtained by planting so late. It is probable, however, that the excessive heat at that time, 100 degrees in the shade, was responsible for this by causing too rapid evaporation and consequent drying of the surface of the ground.

A great deal of the credit for the results obtained should go to Mr. F. E. DeSelle, formerly inspector in this district, as the work was planned by him and it was through his energy and determination that funds were obtained for carrying on the work.

Codlin Moth Banding Record.

There has been a great deal of discussion pro and con as to the advisability of banding apple trees to facilitate the trapping and destruction of descending codlin moth larvae. Some authorities believe that such a practice will pay, others believe that not enough larvae can be destroyed to compensate the grower for his labor. This depends largely on the locality and the age of the orchard. In the upper valleys it would be of doubtful value, but we believe that in the lower valley, particularly in the older orchards, it will do a great deal of good. A year ago band records were kept by Mr. Folger in an old orchard adjoining the Congdon orchards, and last year the work was continued in Mr. McLeod's orchard. Mr. McLeod has himself kept records in previous years and is very enthusiastic about banding.

Two hundred and thirty trees, representing several varieties, were banded with burlap sacking, the bands being put on early in July to make sure of the early members of the first brood. These trees adjoined the experimental plot, and were sprayed by Mr. McLeod throughout the season. All bands were removed every two weeks, the larvae and pupae counted and destroyed and the bands replaced. Records of each tree were kept, which are reproduced here, as they are of more than passing interest, particularly as regards the comparative immunity or susceptibility of the individuals of the various varieties. A summary of some of the more essential features of these tables is appended also:

SUMMARY.

Number of trees banded.....	230
Total number larvae and pupae destroyed.....	7,147
Average number larvae per tree.....	31
Average number pupae per tree.....	4.9
Largest number of larvae on any single tree.....	289
Largest number pupae on any single tree.....	50
Largest number larvae and pupae on single tree.....	339
Date when largest number of larvae and pupae were found.....	August 10, 1917

Dust Sprays.

Dust sprays have created a great deal of interest throughout the country for a number of years. The first dusters could scarcely be termed a success, but recently improved machines have been placed on the market for which very strong claims are made, particularly by Eastern growers. There is little doubt, from the evidence at hand, that dust sprays can be applied more quickly and more cheaply than liquid sprays. The real test then is of their relative efficiency. The Niagara Sprayer Company is now manufacturing a dust machine which has received many favorable recommendations. At the request of their representative, Mr. F. A. Frazier, arrangements were made to try out one of these machines, which was turned over to us gratis with a supply of material. The testing ground chosen included several lots on Miles avenue, near the corner of the Summitview boulevard, the property of Mrs. A. C. Caldwell. There was only one objection to this site, which was the proximity of dwelling houses. If one would live at peace with one's neighbors one should not attempt to use dust sprays, particularly near their clothes lines on Mondays. In all other respects the site was satisfactory, as there was an abundance of scale and codlin moth. When counts were made in the fall we found about 15 per cent of the fruit infested with scale. Better results were obtained with lime-sulphur on

adjoining rows which had practically the same initial infestation. In codlin moth control the best record was made on Plot A, which was sprayed four times. It produced 79.97 per cent clean fruit. We believe that a much more conclusive test could be given in a larger orchard, outside the city limits, where operations would not be cramped. While we are not prepared to recommend dusting in preference to spraying, we recognize that there are some good points about the dusting method which might be brought out more clearly by more detailed work.

(Signed) H. E. WATERBURY,
District Inspector.

CROP ESTIMATES.

For several years the division has gathered data from the different inspectors in the field, from growers, dealers, shippers, and organizations for the purpose of ascertaining the true condition of the crops and the probable yield. This information has been tabulated and reports sent out from time to time giving the results. The reports have been confined almost exclusively to the horticultural crops, but there is a growing demand for them to cover a broader field, including at least the staple crops such as potatoes, hay, corn, and small grains.

This information is demanded by shippers, dealers, fruit product factories, transportation companies, and the different government divisions; hence, it should be so gathered as to be as accurate as possible.

The information is freely given to the press and is always available at the offices of all district inspectors in their several districts, where the courtesies of their offices are always gladly extended to the public.

ORCHARD TREE CENSUS.

In order to get definite up-to-date information as to the scope of the horticultural interests of the state, it seemed advisable to take a tree census in the form of a careful survey of the horticultural resources of the state and collect statistics and general information that may be classified and show the extent of the industry. This work was begun in the fall of 1917 by the district inspectors of the different districts. We did not expect to include every tree in the state, but aimed to get a reasonably accurate count on every commercial orchard and a fair representation of the home orchards. In the principal commercial fruit counties the work is completed. In other outlying counties, where county commissioners have not furnished funds for a county horticultural inspector, the data is yet incomplete, but will be gathered from time to time and as rapidly as possible. Fully 95 per cent of the orchard trees in the state are included in these tables. The compilation is so arranged that it shows the varieties planted in earlier years. These may be compared with the later plantings which will show the tendency toward the best varieties for the different sections. In the early plantings about every variety listed was planted, but during the epoch of commercial tree planting beginning about 1900, planters specialized in varieties and planted large numbers of popular commercial varieties. The list varies somewhat in the different parts of the state, the greatest difference being in the varieties planted east and west of the Cascade range. This is necessary because of the variation in climatic conditions. Over the state Winesaps seem to predominate in numbers, Jonathans ranking second, with Rome Beauty and Delicious running close for third place. In some districts the Wagener is very popular, while Yellow Newtowns, Stay-

man, and Winter Banana are prominent. Esopus Spitzenberg is waning in popularity among growers because of its susceptibility to the ravages of insects and disease. There are several other varieties to be found in the planting in large numbers, some of which were planted as fillers, but are now being left as the permanent trees.

In the orchards west of the range the Baldwin, Northern Spy, King, and Gravenstein are very popular. Winter Banana is quite largely planted in some localities, but generally there is a very promiscuous, conglomerate list of varieties to be found in the older orchards, many of which it is impossible to identify and name. For this reason it is impossible to list the varieties as in the newer orchard sections of the state.

Pears are generally distributed over the entire state, Bartlett's, Anjou, and Winter Nellis being the popular commercial varieties. Bosc is increasing in popularity, especially on the west side, where it is very successfully grown.

Peaches are confined mostly to the territory east of the Cascades, though a few can be found on the coast regions.

Prunes, plums, and cherries are grown generally over the entire state, although there are restrictions as to successful commercial localities.

The strawberry is very cosmopolitan and can be successfully grown in any part of the state, but the bush fruits predominate in the coast territory.

In the interior irrigated valleys the American butternuts, American and European chestnuts, filberts and hickory nuts, and English and Japanese walnuts are grown with varied degrees of success. In all of the coast counties these nuts are successfully grown. Commercial plantings are to be found in some counties.

ORCHARD CENSUS.

District 1—Walla Walla County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS	
	1 Year	3 Years	5 Years	9 Years	12 Years or Older		
APPLES—							
Arkansas.....	50	224	6	1,473	463	2,226	
Delicious.....	142	6,621	6,230	1,144	97	14,234	
Jonathan.....	220	8,198	7,008	24,191	1,461	41,078	
Newtown.....	110	3,465	3,878	2,782	1,366	11,631	
Rome Beauty.....	708	6,964	8,808	27,144	2,615	46,264	
Spitz (Esopus).....	.....	11	621	234	26	892	
Stayman.....	3	5,129	301	356	302	6,091	
Wagner.....	40	.....	40	48	116	244	
Winesap.....	67	9,665	2,670	14,519	905	27,727	
Winter Banana.....	.....	67	417	181	61	726	
White Winter Pearmain.....	72	100	80	553	267	1,072	
Grimes Golden.....	5	38	1,213	557	421	2,234	
Ben Davis.....	12	.....	150	170	1,568	1,930	
Miscellaneous varieties.....	219	307	709	1,962	23,560	26,757	183,106
Crab Apples.....	15	1	.....	.....	.....	16	16
PEARS—							
Miscellaneous varieties.....	8	542	596	533	658	2,632	2,632
PEACHES—							
Eberta.....	56	795	70	577	1,648	3,146	3,146
Crawford.....	.....	112	20	309	555	996	996
Miscellaneous varieties.....	117	412	73	640	253	1,495	1,495
PLUMS AND PRUNES—							
Italian Prunes.....	17,978	4,962	448	3,425	23,703	50,516	50,516
Miscellaneous varieties.....	25	26	.....	530	932	1,513	1,513
APRICOTS—							
Miscellaneous varieties.....	6	10	3	15	28	62	62
CHERRIES—							
Bing.....	48	604	.....	658	960	2,290	2,290
Lambert.....	12	218	7	268	206	711	711
Royal Ann.....	200	44	.....	360	1,064	1,748	
Miscellaneous varieties.....	23	60	15	478	510	1,091	5,839
GRAND TOTAL.....							252,822
OTHER FRUIT—							
Acres Grapes.....	.....	87.5	4	1	.....	92.5	
Acres Bush Fruit.....	24	.....	.....	.....	.....	24	
Acres Strawberries.....	9	.....	.....	.....	.....	9	
Total acres.....							125.5

ORCHARD CENSUS.—Continued.

District 1—Asotin County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS	
	1 Year	3 Years	5 Years	9 Years	12 Years or Older		
APPLES—							
Arkansas.....				15	50	65	
Delfeious.....	35			96	25	146	
Jonathan.....	6	29	3,500	555	123	4,213	
Newtown.....	6	100	5,250	265	48	5,669	
Rome Beauty.....	20	332	5,250	563	471	6,636	
Spitz (Esopus).....			3,500	83	79	3,612	
Stayman.....	10		14,000	135	100	14,245	
Wagener.....				26	11	37	
Winesap.....		123	1,500	69	47	1,729	
Winter Banana.....	10	313		13	7	343	
White Winter Pearmain.....				10	2	12	
Ben Davis.....					4	4	
Miscellaneous varieties.....		6		98	293	400	37,116
PEARS—							
Miscellaneous varieties.....	44	16		76	263	399	399
PEACHES—							
Elberta.....				525	3,006	3,531	
Crawford.....				193	1,473	1,666	
Miscellaneous varieties.....				302	1,991	2,293	7,490
PLUMS AND PRUNES—							
Italian.....				11	601	612	
Miscellaneous varieties.....				54	1,973	2,027	2,639
Nut Trees.....	118						118
APRICOTS—							
Miscellaneous varieties.....		2		19	398	419	419
CHERRIES—							
Bing.....				16	4,415	4,531	
Lambert.....				22	837	859	
Royal Ann.....				20	1,314	1,334	
Miscellaneous varieties.....		18		1	487	488	7,212
OTHER FRUIT—							
Crabapples.....	4					4	
Quince.....	3					3	7
GRAND TOTAL.....							54,423
Strawberries.....	1 A.					1 A.	
Bush Fruit.....						4.5 A.	
Grapes.....						1 A.	
GRAND TOTAL.....							54,423

ORCHARD CENSUS.—Continued.
District 1—Columbia County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS	
	1 Year	3 Years	5 Years	9 Years	12 Years or Older		
APPLES—							
Arkansas.....				956		956	
Delicious.....							
Jonathan.....		150	6,412	4,048		10,608	
Newtown.....		15	5,735	8,628		14,378	
Rome Beauty.....		660	7,600	12,950	100	21,300	
Spitz (Esopus).....				600		600	
Stayman.....							
Wagener.....							
Winesap.....				200		200	
Winter Banana.....		100	10	185		245	
White Winter Pearmain.....							
Grimes Golden.....				185		185	
Ben Davis.....				170		170	
Miscellaneous varieties.....			14	6,600	775	7,389	55,981
PEARS—							
Miscellaneous varieties.....					75	75	75
PEACHES—							
Eldora.....		345	150	25		520	
Crawford.....							
Miscellaneous varieties.....			50			50	590
PLUMS AND PRUNES—							
Italian.....	500					500	
Miscellaneous varieties.....	1,000					1,000	1,500
APRICOTS—							
Miscellaneous varieties.....							
CHERRIES—							
Bing.....							
Miscellaneous varieties.....			10			10	10
GRAND TOTAL.....							58,146

ORCHARD CENSUS.—Continued.

District 1—Garfield County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS	
	1 Year	3 Years	5 Years	9 Years	12 Years or Older		
APPLES—							
Arkansas.....	18	5		3	515	536	
Delicious.....	14	15		1	5	35	
Jonathan.....	4	10		1	200	215	
Newtown.....	8			15	122	145	
Rome Beauty.....	12	510		5	72	599	
Spitz (Esopus).....	12	20			332	364	
Stayman.....					161	161	
Wagner.....	17	20			248	285	
Winesap.....	3	10			84	97	
Winter Banana.....	10	10		1	69	90	
White Winter Pearmain.....					14	14	
Miscellaneous varieties.....	40	300			69	409	2,960
PEARS—							
Miscellaneous varieties.....	6,521	3,240		1,734	2,215	13,710	13,710
PEACHES—							
Elberta.....	440	1,305		6,320	7,913	16,478	
Crawford.....	225	1,200		5,670	7,463	14,558	
Miscellaneous varieties.....	2,210	1,141		3,843	5,820	13,014	57,760
PLUMS AND PRUNES—							
Italian.....	605	2,630			4,785	8,020	
Miscellaneous varieties.....	750	14,892		1,000	4,388	21,030	29,050
Nut Trees.....	24	37		58	60	179	179
APRICOTS—							
Miscellaneous varieties.....	1,092	1,380		672	1,907	5,051	5,051
CHERRIES—							
Bing.....	160	247		235	1,459	2,151	
Lambert.....		100		160	253	513	
Royal Ann.....		129		25	1,284	1,438	
Miscellaneous varieties.....		6		60	503	569	4,676
OTHER FRUIT—							
Orhapples.....	1	1,500			4	1,505	1,505
Quince.....	24	18			24	66	66
GRAND TOTAL.....							114,947
Bush Fruit.....		14				14	
Strawberries.....	3 A.					3 A.	
Grapes.....						29.20 A.	

ORCHARD CENSUS.—Continued.

District 2—Spokane County.

VARIETIES	NUMBER AND AGE OF TREES				TOTALS	
	1 to 3 Years	5 to 8 Years	9 to 11 Years	12 Years or Older		
APPLES—						
Arkansas.....		1,013	133		1,146	
Delicious.....	1,708	13,462	5,800	122	21,088	
Jonathan.....	2,059	181,125	63,886	2,767	250,001	
Newtown.....		3,221	3,019	566	6,806	
Rome Beauty.....	4,206	128,730	59,507	3,393	196,836	
Spitz (Esopus).....	203	5,487	3,792	30	9,482	
Stayman.....	200	3,267	1,349	50	4,866	
Wagener.....	1,670	110,014	54,904	3,290	170,878	
Winesap.....	624	12,292	6,536	230	19,741	
Winter Banana.....	3,919	10,511	2,439	62	16,811	
Miscellaneous varieties.....	586	78,078	18,964	3,016	100,429	877,084
PEARS—						
Anjou.....	70	15	394	15	494	
Bartlett.....	2,436	7,507	1,223	667	11,833	12,327
PEACHES—						
Crawford.....		278	1,150	57	1,485	
Elberta.....	40	521	872	150	1,673	3,158
PLUMS AND PRUNES—						
Miscellaneous varieties.....	1,029	516	743	16	2,304	2,304
APRICOTS—						
Miscellaneous varieties.....		11	44		55	55
CHERRIES—						
Bing.....	34	569	2,333	15	2,951	
Royal Ann.....	28	258	254	363	903	
Miscellaneous varieties.....		140	869		1,009	4,363
GRAND TOTAL.....						890,791

These figures do not include "Arcadia."

ORCHARD CENSUS.—Continued.

District 2—Benton County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS
	1 Year	3 Years	5 Years	9 Years	12 Years or Older	
APPLES—						
Arkansas.....			2,016	4,492	164	6,672
Delicious.....	750	280	21,646	5,940	3,278	31,894
Jonathan.....		150	24,596	62,600	15,888	103,184
Newtown.....			1,116	12,218	81,080	44,364
Rome Beauty.....		550	18,322	31,272	18,238	68,412
Spitz (Esopus).....			7,660	11,850	11,006	30,606
Stayman.....			1,070	3,048	2,104	6,222
Wagener.....			10	75	924	1,009
Winesap.....		1,140	54,222	108,544	44,926	208,832
Winter Bananas.....			2,516	2,002	3,530	8,348
Grimes Golden.....			150	284	1,036	1,470
Gravenstine.....			35	125	155	315
Yellow Transparent.....		220	678	438	804	2,800
Other varieties.....	300	220	744	3,960	5,344	10,558
						526,246
PEARS—						
Anjou.....		80	480	7,584	8,671	16,815
Bartlett.....		288	5,698	14,966	12,307	33,129
Comice.....			585	4,584	1,596	7,755
Winter Nells.....		440	34	7,210	2,805	10,489
Other varieties.....		10	362	1,420	309	2,101
						60,230
PEACHES—						
Elberta.....			1,010	27,314	9,370	37,494
Crawford.....			378	1,238	1,182	2,798
Schlappi.....			110	2,240	930	3,280
Hale Early.....			25	125	75	225
Other varieties.....			384	1,238	1,980	3,602
						47,399
PLUMS AND PRUNES—						
Italian.....	210	320	265	2,002	1,695	4,512
Tragedy.....	350	400	1,560	3,476	30	5,816
Hungarian.....			420	478	31	929
Other varieties.....	25		210	222	66	523
						11,600
APRIOTS—						
Tilton.....	25		24	86	182	317
Other varieties.....	30	42	64	250	538	933
						1,250
CHERRIES—						
Bing.....	3,644	132	468	636	3,512	8,392
Royal Ann.....	144	22	185	244	2,106	2,702
Lambert.....	20	20	174	298	802	1,314
Other varieties.....	235	30	185	190	290	880
						13,388
GRAND TOTAL.....						662,112
OTHER FRUIT—						
Grapes, all ages, 94,700 vines.....						176A
Nuts.....						25A
English Walnuts.....			225	450		675A

ORCHARD CENSUS.—Continued.

District 3—Franklin County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS
	1 Year	3 to 5 Years	5 to 8 Years	9 to 10 Years	12 Years or Older	
APPLES—						
Arkansas.....		10	20	300		330
Delicious.....		192	924	480		1,596
Jonathan.....		2,228	580			2,812
Newtown.....		2,760	1,885			4,645
Rome Beauty.....		2,052	445	610		3,107
Spitz (Esopus).....		2,792	1,135	710		4,637
Stayman.....		10	65			75
Wagner.....			51			51
Winesap.....		4,682	2,365	1,410		8,367
Winter Banana.....		10	15			25
Grimes Golden.....		10	6			16
Gravenstine.....			402			402
Yellow Transparent.....			502	100		602
Miscellaneous varieties.....		20	125		125	261
						27,086
PEARS—						
Anjou.....		680	60	250		990
Bartlett.....		2,672	260	255	15	3,202
Comice.....		3402				402
Winter Nells.....		54				54
						4,648
PEACHES—						
Elberta.....		904	1,735	670		3,309
Crawford.....		634	1,112	420		2,166
Hale Early.....		200				200
Miscellaneous varieties.....		443				443
						6,118
PLUMS AND PRUNES—						
Italian.....		10	35	100		145
Hungarian.....		2	10	5		17
Tragedy.....						
Miscellaneous varieties.....		18	5	5		28
						190
APRICOTS—						
Royal.....		6	30			36
Miscellaneous varieties.....		12	30			42
						78
CHERRIES—						
Bing.....		12	579	160		741
Royal Ann.....		5	329	55		389
Lambert.....		5	60	20		85
Miscellaneous varieties.....		16	42	45		103
						1,318
OTHER FRUIT—						
Concord Grapes.....	600			1,575		2,175
Campbell Early Grapes.....	600			1,525		2,125
Miscellaneous varieties.....	125			480		505
English Walnuts.....			100			100
						4,805
GRAND TOTAL.....						44,343

ORCHARD CENSUS.—Continued.

District 3—Adams County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS	
	1 Year	3 Years	5 Years	9 Years	12 Years or Older		
APPLES—							
Arkansas.....							
Delicious.....				225		225	
Jonathan.....							
Newtown.....				150		150	
Rome Beauty.....				1,250		1,250	
Spitz (Esopus).....				230		230	
Stayman.....				725		725	
Wagner.....							
Winesap.....				4,998		4,998	
Winter Banana.....							
Miscellaneous varieties.....				477	4,350	4,827	12,405
PEARS—							
Bartlett.....				125		125	125
PEACHES—							
Elberta.....				150		150	150
GRAND TOTAL.....							12,680

ORCHARD CENSUS.—Continued.

District 4—Chelan County.

VARIETIES	NUMBER AND AGE OF TREES					Totals
	1 to 2 Years	3 to 4 Years	5 to 8 Years	9 to 11 Years	12 Years or Older	
APPLES—						
Arkansas.....	45	1,511	1,936	1,965	6,584	12,041
Delicious.....	10,061	18,592	139,682	35,651	7,696	211,652
Jonathan.....	2,800	10,113	79,708	63,129	20,425	184,675
Newtown.....		310	8,897	8,083	6,169	18,448
Rome Beauty.....	1,043	16,182	52,061	26,417	16,541	112,193
Spitz (Esopus).....	53	518	26,613	55,374	24,516	107,074
Stayman.....	20	11,151	36,552	23,173	19,443	90,339
Grimes Golden.....	210	9	1,301	2,006	1,952	5,478
Winesap.....	4,504	23,001	202,092	133,537	42,482	405,666
Winter Banana.....	1,730	2,379	7,856	7,371	2,705	22,591
White Winter Pearmain.....	752	865	7,233	8,262	3,869	20,981
Ben Davis (Gano).....		357	6,395	8,508	18,042	33,302
Crabs.....	62	175	1,632	244	529	2,642
Other varieties.....	271	1,096	9,474	16,905	30,758	58,404
Grand total.....						1,285,486
PEARS—						
Anjou.....	2,321	7,612	7,209	2,388	638	20,168
Bartlett.....	7,112	3,499	19,872	10,567	6,477	47,527
Winter Nellie.....	5	137	678	496	331	1,647
Other varieties.....	525	581	3,453	5,027	3,687	13,873
Grand total.....						83,215
PEACHES—						
Miscellaneous varieties.....	237	191	6,303	10,158	9,016	25,906
Grand total.....						25,906
PLUMS AND PRUNES—						
Miscellaneous varieties.....	3,879	108	3,913	1,267	3,706	12,873
Grand total.....						12,873
APRICOTS—						
Moorpark.....	796	1,282	1,636	2,143	844	6,701
Other varieties.....	3,242	158	2,670	2,655	1,151	9,876
Grand total.....						16,577
CHERRIES—						
Bing.....	262	81	827	2,082	4,535	7,787
Lambert.....	250	38	389	940	1,074	2,691
Royal Ann.....			245	1,244	1,718	3,207
Other varieties.....	57	83	531	1,355	1,229	3,255
Grand total.....						16,940

ORCHARD CENSUS.—Continued.

District 4—Okanogan County.

VARIETIES	NUMBER AND AGE OF TREES					Totals
	1 to 2 Years	3 to 4 Years	5 to 8 Years	9 to 11 Years	12 Years or Older	
APPLES—						
Arkansas.....		75	2,057	783	64	2,979
Dalicious.....	2,686	5,657	58,955	4,546	30	71,874
Jonathan.....	840	9,226	68,797	12,530	621	92,514
Newtown.....		200	10,818	2,936	848	18,796
Rome Beauty.....	40	3,456	13,189	8,082	102	19,819
Spitz (Esopus).....	304	2,141	47,142	12,772	560	62,919
Stayman.....		8,331	18,508	1,454	206	23,558
Grimes Golden.....		53	577	353		983
Winesap.....	502	8,493	127,727	21,898	178	158,798
Winter Banana.....	102	594	3,371	614	71	4,812
White Winter Pearmain.....		150	653	556	40	1,399
Black Ben (Gano).....		337	2,234	769	335	3,675
Crabs.....		37	17	35	10	99
Other varieties.....		2,887	6,480	1,296	1,112	11,765
Grand total.....						462,965
PEARS—						
Anjou.....	64	1,184	1,295	431		2,974
Bartlett.....	98	780	3,548	1,754	78	6,253
Winter Nells.....		109	450	78	6	643
Other varieties.....	16	156	2,001	239	100	2,512
Grand total.....						12,382
PEACHES—						
Miscellaneous varieties.....	10	243	5,555	3,475	88	9,366
Grand total.....						9,366
PLUMS AND PRUNES—						
Miscellaneous varieties.....	2	24	507	74	63	660
Grand total.....						660
APRICOTS—						
Moorpark.....	5	19	358	28	1	411
Other varieties.....	4	13	1,968	532	39	2,456
Grand total.....						2,867
CHERRIES—						
Bing.....	62	12	146	139	101	460
Lambert.....	56	6	22	61	100	245
Royal Ann.....		16	72	70	5	163
Other varieties.....	73	203	1,996	564	338	3,174
Grand total.....						4,042

ORCHARD CENSUS.—Continued.
District 4—Douglas and Grant Counties.

VARIETIES	DOUGLAS				GRANT			
	Number and Age of Trees				Number and Age of Trees			
	1 to 4 Years	5 to 8 Years	9 to 12 Years	Total	1 to 4 Years	5 to 11 Years	12 or Older	Total
APPLES—								
Arkansas.....	90	530	92	712		4,007		4,007
Delfeious.....	7,599	28,890	28,472	64,961	210	36,395		36,605
Jonathan.....	2,097	26,645	28,547	57,289		31,403		31,403
Newtown.....	90	797	2,226	3,113		12,508		12,508
Rome Beauty.....	1,662	9,525	6,878	18,065	166	25,034		26,100
Spitz (Esopus).....	423	17,056	14,564	32,073		9,767		9,767
Stayman.....	600	11,494	7,810	19,904		25,247		25,247
Grimes Golden.....	75	289	254	618		2,430		2,430
Winesap.....	4,778	85,112	68,822	153,712	311	50,322		50,633
Winter Banana.....	1,203	4,427	3,970	9,609	126	3,150		3,276
White Winter Pearmain.....	807	1,706	1,407	3,920		5,112		5,112
Black Ben (Gano).....	83	1,334	4,509	5,926		932		932
Crabs.....	111	240	65	406				
Other varieties.....	242	5,991	3,987	10,220		11,021	450	11,471
Grand total.....				380,523				219,491
PEARS—								
Anjou.....	435	1,846	545	2,826		400	620	1,020
Bartlett.....	396	4,768	3,905	9,069	100	9,595	115	9,810
Winter Nells.....	12	58	265	335		655		655
Other varieties.....	180	1,114	1,346	2,640		501		501
Grand total.....				14,870				11,986
PEACHES—								
Miscellaneous varieties.....	126	7,814	6,099	14,039		2,077	590	2,667
Grand total.....				14,039				2,667
PLUMS AND PRUNES—								
Miscellaneous varieties.....	368	256	249	873		3,062	20	3,102
Grand total.....				873				3,102
APRICOTS—								
Moorpark.....	358	1,685	3,188	5,181		805		805
Other varieties.....	1,251	2,915	1,294	5,460		75	6	81
Grand total.....				10,641				886
CHERRIES—								
Bing.....	29	406	595	1,030		1,043	50	1,093
Lambert.....	6	336	151	493		528	25	553
Royal Ann.....		177	296	473		96		96
Other varieties.....	78	879	679	1,636		82	9	91
Grand total.....				3,632				1,835

ORCHARD CENSUS.—Continued.

District 5—Yakima County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS
	1 to 3 Years	3 to 6 Years	7 to 10 Years	10 to 12 Years	12 Years or Older	
APPLES—						
Arkansas.....	2,118	5,147	12,920	9,343	2,516	32,044
Delicious.....	10,490	38,843	55,814	929	1,279	106,845
Jonathan.....	8,792	145,316	288,446	87,166	15,897	490,317
Newtown.....	192	5,943	50,151	11,510	9,719	86,515
Rome Beauty.....	1,538	68,094	97,899	27,336	11,150	219,332
Spitz (Esopus).....	403	24,316	85,692	16,596	10,891	137,898
Stayman.....	1,153	2,484	12,777	5,353	2,710	23,477
Wagner.....	241	27,679	29,375	4,771	790	62,866
Winesap.....	16,766	157,225	512,918	67,922	21,679	776,500
Winter Banana.....	546	1,276	6,670	1,119	88	9,699
Ben Davis.....	.....	356	1,329	2,964	8,881	13,536
Grimes Golden.....	25	894	5,329	8,978	2,811	13,037
White Winter Pearmain.....	356	501	1,243	925	1,833	4,861
Miscellaneous varieties.....	1,619	5,947	26,583	16,833	22,185	73,264
						2,050,181
PEARS—						
Anjou.....	4,492	8,225	14,213	1,703	1,097	29,730
Bartlett.....	9,807	70,136	221,322	34,164	15,554	350,983
Comice.....	391	1,720	10,959	2,080	103	16,233
Winter Nellis.....	9,209	21,507	53,054	5,354	1,132	90,316
Miscellaneous varieties.....	400	879	3,592	530	1,485	6,886
						494,115
PEACHES—						
Crawford.....	70	901	9,106	1,233	751	12,061
Elberta.....	2,042	20,693	179,558	24,603	15,396	242,292
Miscellaneous varieties.....	2,119	8,759	30,533	7,023	1,523	49,902
						304,315
PLUMS AND PRUNES—						
Italian.....	8,484	5,764	3,439	5,085	15,125	37,897
Tragedy.....	11,828	7,090	3,920	676	490	23,944
Miscellaneous plum and prune....	3,053	3,618	1,584	769	1,426	10,450
						72,291
APRICOTS—						
Miscellaneous varieties.....	2,467	653	4,442	1,040	419	9,026
						9,026
CHERRIES—						
Bing.....	911	726	9,541	2,340	980	14,498
Lambert.....	175	75	2,336	436	190	3,212
Royal Ann.....	73	219	4,822	1,197	998	17,279
Miscellaneous varieties.....	748	1,654	6,200	2,792	1,719	13,118
						38,102
OTHER FRUIT—						
Miscellaneous varieties.....	20	427	4,144	1,268	1,519	7,378
						7,378
GRAND TOTAL.....						2,975,411

ORCHARD CENSUS.—Continued.

District 6—Clarke County.

VARIETIES	NUMBER AND AGE OF TREES			TOTALS
	1 to 6 Years	6 to 10 Years	12 Years or Older	
Apples.....	6,698	29,818	48,184	84,700
Walnuts.....	1,842	2,834	2,400	7,136
Pilberts.....	211	385	1,154	1,750
Almonds.....	7	.....	32	39
Figs.....	.....	8	10	18
Mulberries.....	10	.....	.....	10
Quinces.....	6	11	38	50
Chestnuts.....	.....	.....	25	25
PEARS— All varieties.....	2,051	2,751	22,084	26,886
Family orchards.....	2,696	6,697	40,945	50,311
PEACHES— All varieties.....	1,037	1,613	531	3,181
Grapes.....	.....	.....	.....	18,850
PLUMS AND PRUNES— Miscellaneous varieties.....	165,451	99,598	390,941	655,990
APRICOTS— Miscellaneous varieties.....	.....	4	16	20
CHERRIES— All varieties.....	598	1,885	5,842	7,925
GRAND TOTAL.....	.....	.....	.....	367,241
OTHER FRUIT— Blackberries Raspberries Loganberries Strawberries	.....	.....	.....	100 A.

ORCHARD CENSUS.—Continued.
District 6—Skamania County.

VARIETIES	NUMBER AND AGE OF TREES	TOTALS
	5 to 12 Years or Older	
APPLES—		
Arkansas.....	343	
Delicious.....	2,327	
Jonathan.....	648	
Newtown.....	2,206	
Rome Beauty.....	683	
Spitz (Esopus).....	11,455	
Stayman.....	123	
Wagener.....	123	
Winnsap.....	91	
Winter Banana.....	1,812	
Ortley.....	8,926	
Gravenstine.....	523	44,950
PEARS—		
Anjou.....	8,443	
Bartlett.....	1,575	
Comice.....	9	
Winter Nellis.....	499	
Miscellaneous varieties.....	1,284	11,800
PEACHES—		
Crawford.....	235	
Foster.....	401	
Elberta.....	204	
Mayflower.....	400	
Elton.....	184	
Other varieties.....	112	1,539
PLUMS AND PRUNES—		
Italian.....	136	
Other varieties.....	46	182
APRICOOTS—		
Moor Park.....	5	5
CHERRIES—		
Bing.....	126	
Lambert.....	86	
Black Republican.....	18	
Other varieties.....	170	349
OTHER FRUIT—		
Walnuts.....		72
GRAND TOTAL.....		58,897

ORCHARD CENSUS.—Continued.
District 7—Lewis County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS
	1 Year	3 Years	5 Years	7 Years	12 Years or Older	
APPLES—						
Miscellaneous varieties.....	1,200	3,600	7,500	10,500	12,500	35,300
PEARS—						
Miscellaneous varieties.....	1,200	2,000	2,500	3,000	2,500	11,200
PEACHES—						
Miscellaneous varieties.....	25	200	250	100	100	675
Quinces.....						400
Walnuts.....						200
PLUMS AND PRUNES—						
Miscellaneous varieties.....	1,000	2,500	500	4,500	2,500	11,000
CHERRIES—						
Miscellaneous varieties.....	2,500	15	1,200	1,125	3,000	7,830
GRAND TOTAL.....						66,605
Bush Fruit.....						50 A.
OTHER FRUIT—						
Strawberries.....	200					200

ORCHARD CENSUS.—Continued.

District 7—Grays Harbor County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS
	1 Year	3 Years	5 Years	9 Years	12 Years or Older	
APPLES—						
Miscellaneous varieties.....	6	1,500	4,000	4,000	7,000	16,506
PEARS—						
Miscellaneous varieties.....	200	250	300	300	1,000	2,050
PEACHES—						
Miscellaneous varieties.....	50	50	55	40	10	215
PLUMS AND PRUNES—						
Miscellaneous varieties.....	75	200	225	450	2,500	3,450
Walnuts.....						100
Quinces.....						225
CHERRIES—						
Miscellaneous varieties.....	50	100	115	500	800	1,565
GRAND TOTAL.....						24,111
OTHER FRUIT—						
Strawberries.....						50 A.
Cranberries.....						150 A.
Bush Fruit.....						50 A.

ORCHARD CENSUS.—Continued.
District 7—Pacific County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS
	1 Year	3 Years	5 Years	9 Years	12 Years or Older	
APPLES—						
Miscellaneous varieties.....	200	225	350	1,500	2,500	4,775
PEARS—						
Miscellaneous varieties.....	75	100	150	200	400	925
Quinces.....						50
Walnuts.....						25
PLUMS AND PRUNES—						
Miscellaneous varieties.....	50	75	300	300	50	500
CHERRIES—						
Miscellaneous varieties.....						550
GRAND TOTAL.....						6,915
OTHER FRUIT—						
Oranberries.....						800 A.
Strawberries.....						10 A.
Bush Fruit.....						10 A.

ORCHARD CENSUS.—Continued.

District 7—Thurston County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS
	1 Year	3 Years	5 Years	9 Years	12 Years or Older	
APPLES—						
Miscellaneous varieties.....	1,500	2,500	4,000	10,000	20,000	38,000
PEARS—						
Miscellaneous varieties.....	500	750	1,200	2,000	1,500	6,900
PEACHES—						
Miscellaneous varieties.....	50	50	200	350	200	850
Walnuts.....						50
Quinces.....						100
PLUMS AND PRUNES—						
Miscellaneous varieties.....	50	150	225	2,000	3,500	5,925
CHERRIES—						
Miscellaneous varieties.....	400	550	1,000	1,000	500	3,450
GRAND TOTAL.....						55,835
OTHER FRUIT—						
Bush Fruit.....						20 A.
Strawberries.....						12 A.
Cranberries.....						10 A.

ORCHARD CENSUS.—Continued.
District 7—Mason County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS
	1 Year	3 Years	5 Years	9 Years	12 Years or Older	
APPLES— Miscellaneous varieties.....	300	500	1,000	2,500	3,000	7,300
PEARS— Miscellaneous varieties.....	100	175	250	325	400	1,200
PEACHES— Miscellaneous varieties.....	50	75	100	150	50	425
PLUMS AND PRUNES— Miscellaneous varieties.....	100	150	250	250	300	1,050
Nut Trees.....						50
CHERRIES— Miscellaneous varieties.....	100	100	200	325	375	1,100
GRAND TOTAL.....						11,125
Grapes.....						50 A.
OTHER FRUIT— Quince.....			200			200
Bush Fruit.....			20 A.			20 A.
Strawberries.....			15 A.			15 A.

ORCHARD CENSUS.—Continued.
District 8—Jefferson County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS
	1 Year	3 Years	5 Years	9 Years	12 Years or Older	
APPLES— Miscellaneous varieties.....						12,010
PEARS— Miscellaneous varieties.....						803
PLUMS AND PRUNES— Miscellaneous varieties.....						1,113
CHERRIES— Miscellaneous varieties.....						2,004
OTHER FRUIT— Strawberries.....						7 A.
Raspberries.....						5 A.
Blackberries.....						5 A.
Loganberries.....						5 A.

ORCHARD CENSUS.—Continued.

District 8—Clallam County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS
	1 Year	3 Years	5 Years	9 Years	12 Years or Older	
APPLES— Miscellaneous varieties.....						24,302
PEARS— Miscellaneous varieties.....						2,403
PLUMS AND PRUNES— Miscellaneous varieties.....						2,101
CHERRIES— Miscellaneous varieties.....						4,115
OTHER FRUIT— Strawberries.....						5 A.
Raspberries.....						6 A.
Loganberries.....						10 A.

ORCHARD CENSUS.—Continued.

District 8—Pierce County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS
	1 Year	3 Years	5 Years	9 Years	12 Years or Older	
APPLES— Miscellaneous varieties.....				75,180		75,180
PEARS— Miscellaneous varieties.....				20,160		20,160
PLUMS AND PRUNES— Miscellaneous varieties.....				6,211		6,211
CHERRIES— Miscellaneous varieties.....				9,010		9,010
OTHER FRUIT— Raspberries.....						1,055 A.
Blackberries.....						542 A.
Strawberries.....						97 A.
Loganberries.....						14 A.

ORCHARD CENSUS.—Continued.

District 8—Kitsap County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS
	1 Year	3 Years	5 Years	9 Years	12 Years or Older	
APPLES—						
Miscellaneous varieties.....						42,190
PEARS—						
Miscellaneous varieties.....						11,201
PLUMS AND PRUNES—						
Miscellaneous varieties.....						3,109
CHERRIES—						
Miscellaneous varieties.....						8,010
OTHER FRUIT—						
Strawberries.....						90 A.
Raspberries.....						10 A.
Blackberries.....						5 A.
Loganberries.....						5 A.

ORCHARD CENSUS.—Concluded.

District 9—King County.

VARIETIES	NUMBER AND AGE OF TREES					TOTALS
	1 Year	3 Years	5 Years	9 Years	12 Years or Older	
APPLES—						
Miscellaneous varieties.....						81,750
PEARS—						
Miscellaneous varieties.....						24,240
PEACHES—						
Miscellaneous varieties.....						3,692
PLUMS AND PRUNES—						
Miscellaneous varieties.....						17,960
APRICOTS—						
Miscellaneous varieties.....						869
CHERRIES—						
Miscellaneous varieties.....						27,796
OTHER FRUIT—						
Quince.....						714
Nuts.....						409
GRAND TOTAL.....						155,929

VARIETY ORCHARD CENSUS BY DISTRICTS—TOTAL NUMBER OF APPLE TREES.

APPLES	District 1	District 2	District 3	District 4	District 5	District 6	District 7	District 8	District 9	District 10	Totals
Arkansas.....	2,327	1,146	7,327	20,434	32,044	343	.....	.....	.....	.....	64,021
Dalicious.....	14,666	21,088	84,015	376,123	106,845	2,327	.....	.....	.....	.....	555,064
Jonathan.....	56,119	250,001	105,968	440,680	430,317	649	.....	.....	.....	.....	1,343,720
Newtown.....	31,923	6,808	40,150	43,883	86,515	2,205	.....	.....	.....	.....	220,391
Rome Beauty.....	74,711	106,638	72,700	814,251	219,332	683	.....	.....	.....	.....	777,592
Spitz.....	5,463	9,432	35,473	249,630	187,898	11,455	.....	.....	.....	.....	449,493
Strayman.....	26,507	4,868	7,022	215,284	23,477	123	.....	.....	.....	.....	271,279
Wagener.....	566	170,878	1,060	5,737	62,856	123	.....	.....	.....	.....	241,270
Winecap.....	29,762	19,741	222,177	865,761	776,300	91	.....	.....	.....	.....	1,904,032
Winter Banana.....	1,404	16,811	8,573	36,966	9,699	1,912	.....	.....	.....	.....	75,184
Ben Davis.....	2,104	.....	.....	16,761	13,536	.....	.....	.....	.....	.....	31,391
Grimes Golden.....	2,869	.....	1,466	.....	13,037	.....	.....	.....	.....	.....	10,892
White Winter Pearmain.....	1,103	.....	717	41,121	4,861	.....	.....	.....	.....	.....	47,065
Gravenstine.....	.....	.....	.....	.....	.....	523	.....	.....	.....	.....	1,240
Yellow Transparent.....	.....	.....	7,849	33,318	.....	.....	.....	.....	.....	.....	7,849
Gano.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	83,313
Orley.....	.....	.....	.....	.....	.....	3,926	.....	.....	.....	.....	3,926
Miscellaneous varieties.....	17,246	100,429	15,646	115,090	73,234	84,700	101,881	86,020	81,750	.....	574,115
Totals.....	260,675	791,084	568,930	2,654,047	2,080,131	109,059	101,881	86,020	81,750	.....	6,617,785

**APPROXIMATE FIGURES FOR FOURTEEN COUNTIES—FRUIT TREE DATA
FROM 1912 RECORDS, NOT INCLUDED IN PREVIOUS TABLES.**

COUNTIES	Apple	Pear	Peach	Cherry	Plum, Prune	Apricot
Cowlitz.....	21,000	3,200	.....	2,500	6,550	.....
Ferry.....	28,000	7,500	.....	1,800	1,000	.....
Island.....	54,000	.....	.....	.....	.....	.....
Kittitas.....	16,000	.....	.....	.....	.....	.....
Lincoln.....	86,000	174,200	84,000	.....	6,000	.....
Pend Oreille.....	126,000	850	800	900	5,400	.....
San Juan.....	50,000	70,000	.....	3,500	6,800	.....
Skagit.....	60,000	18,500	.....	8,100	6,800	.....
Snohomish.....	81,000	20,500	.....	9,000	5,500	.....
Stevens.....	33,000	23,000	12,000	7,800	13,200	.....
Wahkiakum.....	6,550	4,950	3,900	1,250	5,500	.....
Whatcom.....	40,000	7,900	.....	8,800	5,800	.....
Whitman.....	186,000	9,200	83,000	14,200	6,850	6,800

POLICE WORK.

The regulatory or police work has to do with the inspection of all warehouses, storerooms, orchards, markets, fruits, or vegetables, and if infection is found inspectors are empowered with authority to disinfect or if necessary to condemn and destroy any property which is or may become a menace to the horticultural interests of the state, or if any fruit found upon the market is misbranded as to grade or pack they see that the markings are changed to correspond with the grade of the fruit.

During the shipping season frequent visits are made by the inspectors to the packing houses, warehouses, and shipping points to ascertain if the grade and the pack conforms with the provisions of the law. If it does not, fruit is either repacked or else the grade markings are changed before the fruit can be shipped. The law provides for the giving of permits for fruit to be used for by-products. This privilege is sometimes abused by shippers purchasing cull fruit securing a permit to ship to certain by-product plants, and after the car is rolled, order it diverted to other points, sometimes to other states, where the fruit is sold in the open markets. When such cases are found within the state the inspector can seize and handle the fruit as conditions warrant. The law explicitly forbids the placing of wormy apples upon the open markets in the state and each year there are more or less arrests and convictions of peddlers and hucksters who try to evade this phase of the law.

CLEAN-UP WORK.

In all fruit sections there is more or less non-resident orchard property, which is a menace to adjoining orchards.

It is necessary to look over these properties carefully each year and ascertain if caretakers are giving them the proper attention, to keep them from becoming a harbor for pests.

When this condition arises it becomes necessary to do such cleanup work as is advisable. It may be pruning, spraying, or both, and in some cases general condemnation is ordered and the orchard removed so that it may not become a menace to the community.

Blight, San Jose scale, and some other of the most serious pests make more or less cleanup work necessary each year.

This work is usually done while the trees are dormant. Last season 156 notices were served, and where the owner or caretaker did not give the trees the proper attention the matter was handled by the inspection service and the cost charged against the property.

INSPECTION.

The inspection work consists in the careful examination of all orchards and nurseries within the state as far as available funds will permit, to ascertain if they are free from dangerous insects or disease. The examination of imported nursery stock, whether coming from other states or from foreign countries, the examination of commercial fruit to see if it is clean of pests and that it is graded and packed according to the grading rules of the state adopted for the current season. Potatoes and vegetables in general coming into the state from other states are inspected against tuber moth or other infestation.

WEEKLY REPORTS.

Weekly reports are made by all inspectors in which they designate the character of work performed for that period and report any matters coming under their observation which needs special attention. The following copy of the report shows the volume of the work done during the last nine months of the fiscal year, from October 1, 1917, to July 1, 1918. These reports give us a check upon the men in the field and keep us informed as to their general activities in the different parts of the state. Weather conditions such as frosts, severe wind storms, or hard freezes are reported, and any unusual prevalence of insect activity is noted.

Labor conditions at spraying or harvesting periods is reported, all of which is essential information that we must have if we keep in close touch with the general field conditions.

STATE OF WASHINGTON—DEPARTMENT OF AGRICULTURE.

DIVISION OF HORTICULTURE.

Following record is for nine months, October 1, 1917, to July 1, 1918:
The size of report blanks is 8½x14 inches.

	LOCALITY OR TOWN	INSPECTED		Demonstrations, Lectures, or Meetings	Letters Sent Out, Not Circulars	Tele- phone Calls	List of Farms Visited
		Orchards (Acres)	Nurseries or Crops				
Monday							
Tuesday		134,607 acres of orchards inspected.					
Wednesday		2,221 orchards inspected; acreage not given.					
Thursday		2,680 acres of nurseries and nursery crops inspected.					
Friday		372 nurseries and crops inspected; acreage not given.					
Saturday							
				144	6,085	6,271	10,217

Days and half days in office.....	518	MATTERS NEEDING SPECIAL ATTENTION
Days and half days in field.....	2,134	
Number of circulars sent out.....	23,258	
Miles traveled by auto.....	86,715	
Miles traveled by rail.....	9,904	
Miles traveled by other conveyance.....	6,634	
Condemnation and clean-up notices sent, 156		

The reverse side of this weekly report blank (8½ by 14 inches).

INSPECTION OF FRUITS OR VEGETABLES.

Date	GROWER OR SHIPPER	SOLD OR CONSIGNED TO	NUMBER OF PACKAGES		Inspection	Remarks, Disposition, Etc.
			Inspected	Condemned		
Nine months' summary of these reports, October, 1917, to June 30, 1918.....			{ 308,732 57 cars	24,992 6 cars	.....	.....
Packages repacked.....			.....	.....	.....	2,058

NURSERY INSPECTION.

The inspection of nurseries and nursery stock is done mostly at the digging and shipping season, because this is the only time when the conditions of both stock and roots can be properly examined. This branch of the inspection is very important, as upon it depends the distributing of nothing but healthy stock. The inspection of foreign stock is given close attention in order that new pests from foreign countries may not be imported on the stock. Seattle is the principal distributing point for nursery stock in the Northwest. Mr. F. N. Rhodes has in charge both the federal and state inspection work at that point.

The law requires that all nurseries operating in the state shall have a state license. This is a protection to the purchaser of nursery stock because if he secures his stock from a licensed nurseryman, that nursery is under bond to produce healthy stock true to the name for which it was sold.

The following list shows the nurseries licensed for the years 1916-1917 and 1917-1918. The license fee is \$5.00 a year and the bond requirement is \$1,000.00:

**LIST OF NURSERYMEN AND FLORISTS LICENSED TO DO BUSINESS IN
THE STATE OF WASHINGTON FOR THE YEAR 1916-1917.**

Aabling-Boyce Seed Co., 89 Pike Street, Seattle.
 Art Floral Co.; C. Noll, proprietor, 94 Pike Street, Seattle.
 Beall Greenhouse Co., Seattle.
 Bear, C. H., 6420 Flora Avenue, Seattle.
 Blossom Floral Co., Walla Walla.
 Bonnell, J. J., 2601 East Galer Street, Seattle.
 Boyd Nursery, Everett.
 Broadway Floral Co.; L. Le Gros, proprietor, Everett.
 Brown, E. E., Detroit.
 Buchanan, J. A. and A. A., Quarnberg, Vancouver.
 Burien Lake Nursery, 204 Second Avenue South, Seattle.
 Burt, A. J., florist, 829 Riverside Avenue, Spokane.
 Carver, Gleason A., 2324 North Fiftieth Street, Seattle.
 Capital City Nurseries and Greenhouse, Olympia.
 Capital Hill Floral Co., 1524 Fifteenth Avenue North, Seattle.
 Capital Hill Floral Co., 1524 Fifteenth Avenue, Seattle.
 Christopher Nurseries, Christopher.
 City Floral and Seed Co., 1910 Hewett Avenue, Everett.
 Columbia and Okanogan Nursery Co., Wenatchee.
 Cornwall Park Nursery and Floral Co., Bellingham.
 Dameyer, C., 603 Leary Building, Seattle.
 Davis, W. H., Kirkland.
 Driscoll, James A., 11 West Main Avenue, Spokane.
 Everett Floral Co., 1814 Hewitt Avenue, Everett.
 Evergreen Nursery, Third Avenue and Pine Street, Seattle.
 Evergreen Nursery, Tacoma.
 Ferndale Nursery, Ferndale.
 Fremont Floral Co., North Fortieth and Evanston, Seattle.
 Fugito, T., 407 Riverside Avenue, Spokane.
 Furuya Co., M., Inc., 216 Second Avenue South, Seattle.
 Gerhardt, O., Box 76, Riverton.
 Heege, Otto, 1401 Trenton Avenue, Seattle.
 Hinz, A. A., 618 South K Street, Tacoma.
 Hoadly, C., Kennewick.
 Hollywood Gardens, Inc., 1534 Second Avenue, Seattle.
 Home Nursery Co., Richland.
 Hopkins, J. G., Tukwila.
 Hopkins, T. R., R. F. D. No. 1, Kirkland.
 Horst's Floral Shop, Bellingham.
 Hoyt Brothers Co., 11 Post Street, Spokane.
 Hulsemann, L. H., Lakeside.
 Island Nurseries and Fruit Farm, Vashon.
 James, J. H., 928 South Tenth Street, Pasco.
 Kelley, A. A., nurseryman and gardener, Station B, Spokane.
 Key City Greenhouses, Port Townsend.
 Kincaid, J. W., Bellingham.
 Kittle and Langlois, Ritzville.
 Krause, H. E., R. F. D. No. 8, Spokane.

Lake Chelan Nursery Co., Chelan.
 Lakeview Nursery, 1601 Fifteenth Avenue North, Seattle.
 Lange, Paul E., 8513 Weedin Place, Seattle.
 Latona Floral Co., 347 East Fifty-sixth Street, Seattle.
 Lewis, J. W., Box 245, Sedro Woolley.
 McCormick, Mr. H. B., 1121 High Street, Bellingham.
 McCormack Brothers, Pacific and Fifteenth, Tacoma.
 McCoy, L. W., Second and Marion Streets, Seattle.
 Meadowdale Nursery, R. F. D. No. 1, Edmonds.
 Methow Trading Co., Winthrop.
 Moffet, Fred I., R. F. D. No. 1, Ellensburg.
 Mt. Vernon Nursery Co., Mt. Vernon.
 Nishitani, D., R. F. D. No. 1, Box 92, Seattle.
 Northern Pacific Nurseries, Toppenish.
 Ornamental and Fruit Nursery Co., Wapato.
 Overman's Nursery, 29 Monroe Street, Spokane.
 Payne, Frank E., Camas.
 Pioneer Floral Co., 3118 Yesler Way, Seattle.
 Prosser Nurseries, Prosser.
 Pudor, O. M., Puyallup.
 Puget Sound Nursery and Seed Co., Seattle.
 Puyallup Nursery, Puyallup.
 Rainier Nursery, Third and Pine Streets, Seattle.
 Reimer's Floral Art Shop, 807 Riverside Avenue, Spokane.
 Richmond Nurseries, Richmond.
 Riegel, E. and W. I. Cooper, Vancouver.
 Riverside Nursery; R. A. Jones, proprietor, Spokane.
 Rosala Brothers, 1003 Third Avenue, Seattle.
 Rosecraft Fruit Farm, Sumner.
 Sanved, Peter, nurseryman, 1803 Thirty-ninth North, Seattle.
 Sea View Park Greenhouse and Nursery, 6539 California Avenue, Seattle.
 Seattle Floral Co., Fourth Avenue and Denny Way, Seattle.
 Seattle Nursery Co.; Gerald Carver, proprietor, Seattle.
 Shomaker, Joel, Nellita.
 Simpson, Chas. S., Yakima.
 Slaughenhaupt, J. B., Kennewick.
 Slauson, H. B., 5416 Morgan Street, Seattle.
 Smith Floral Co., 1716 South Fifty-sixth Street, Tacoma.
 Snohomish Nursery; W. J. Ricketts, proprietor, Snohomish.
 Spokane Nursery; Otto Hubenthal, proprietor, Spokane.
 Stapleton, Donart, Spokane.
 Stephens, C. D., R. F. D. No. 4, Yakima.
 Stitz, A. A., Everett.
 Stuber and Richardson, 4852 Holly Street, Seattle.
 Tate, C. P., Grandview.
 Toppenish Nursery Co., Toppenish.
 Turner, Garrison, 4320 Fourteenth Avenue Northeast, Seattle.
 The Bon Marche, Second and Pike, Seattle.
 The Burdett Co., First and Denny Way, Seattle.
 The Northern Nurseries, Otis Orchards.
 University Nursery and Greenhouse, 4008 Ninth Avenue Northeast, Seattle.
 Walght, Chas. H., 2052 North Seventy-eighth Street, Seattle.
 Washington Nursery Co., Toppenish.
 Wenatchee Home Nursery, Wenatchee.
 Westlake, T. E., care Westlake Public Market, Spokane.
 White Salmon Nursery, White Salmon.
 Whitney, F. A., 3848 Thirty-fourth Avenue West, Seattle.
 Wibra, G. I., Chehalis.
 Wingren, O. J., LaConner.
 Woolworth & Co., F. W., 1106 Pacific Avenue, Tacoma.
 Yakima & Columbia River Nurseries Co., Yakima.
 Yakima Valley Nursery Co., Toppenish.
 Young, W. D., Kennewick.
 Young & Lester, nurserymen, Walla Walla.

OUTSIDE THE STATE.

Albany Nurseries, Albany, Ore.
 Birchler, Henry, 1406 East Stark Street, Portland, Ore.
 Bobbink & Atkins, Rutherford, N. J.
 Butzer, J. J., 188 Front Street, Portland, Ore.
 Capital City Nursery, Salem, Ore.
 Clark Brothers, nurserymen, 287 Morrison Street, Portland, Ore.
 Dreer, Henry A., 714 Chestnut Street, Philadelphia, Pa.
 Eastern Nurseries, Jamaica Plain, Mass.
 Gardner Nursery Company, Osage, Iowa.
 German Nurseries and Seed House, Beatrice, Neb.
 Kellogg, R. M. Company, Three Rivers, Mich.
 Lafayette Nursery Co., Lafayette, Ore.
 Meehan, Company, Thos. B., Dresher, Pa.
 Milton Nursery Co., Milton, Ore.
 Oregon Nursery Co., Orenco, Ore.

Pacific Nursery Co., Portland, Ore.
 Pilkington, J. B., P. O. Box 242, Portland, Ore.
 Portland Seed Co., Inc., Front and Yamhill Streets, Portland, Ore.
 Portland Wholesale Nursery Co., 112½ Grand Avenue, Portland, Ore.
 Quaker Nurseries, Salem, Ore.
 Rose Valley Nursery, 1052 Corbett Street, Portland, Ore.
 Russellville Nurseries, Inc., R. F. D. No. 1, Box 265, Portland, Ore.
 Salem Nursery Co., Salem, Ore.
 Sherbrooke, W. E., Cornelius, Ore.
 Silva-Bergtholdt Co., New Castle, Cal.
 Stark Bros. Nurseries and Orchard Co., Louisiana, Mo.
 Storrs & Harrison Co., Painesville, Ohio.
 Taylor & Co., H. S., Rochester, N. Y.
 True-to-Name Nursery, Hood River, Ore.
 The Villa Nursery, R. F. D. No. 1, Box 395, Portland, Ore.
 Weed Landscape Nursery, Beaverton, Ore.
 Wheelock, Alton R. and Herbert E. Congdon, North Collins, N. Y.

LIST OF NURSERYMEN AND FLORISTS LICENSED TO DO BUSINESS IN THE STATE OF WASHINGTON FOR THE YEAR 1917-1918.

Adams County—

Kittel, J. C., Ritzville.

Asotin County—

Lewiston-Clarkston Improvement Co., Clarkston.

Benton County—

Gardner, J. R., Richland.

Home Nursery Co.; Fred P. Freeman, proprietor, Richland.

Prosser Nurseries, P. E. Nickerson, proprietor, Prosser.

Slaughtenhaupt, J. B., Kennewick.

Chelan County—

Columbia & Okanogan Nursery Co., Inc., Wenatchee.

Hulseman, L. H., Lakeside.

Post, Fred L., Chelan.

Clarke County—

Buchanan & Quarnberg, Vancouver.

Hansen, Andrew, Vancouver.

Lewis, Mrs. Harriet C., Vancouver.

Luepke, Frank, Vancouver.

Palmer, Chester M., R. F. D. No. 3, Box 32, Vancouver.

Payne, Frank E., Camas.

Riegel, E. and W. I. Cooper, Vancouver.

Ward, A. A., Brush Prairie.

King County—

Aabling-Boyce Seed Co., Inc., 89 West Pike Street, Seattle.

Allen, F. B., 506 North Seventy-second Street, Seattle.

Araki, N., Elmgrove Street, South Park, Seattle.

Art Floral Co.; G. Nojl, proprietor, 94 Pike Street, Seattle.

Bauer, Christian, 530 Twenty-eighth Avenue North, Seattle.

Beall Greenhouse Co., Vashon.

Bear, C. H., 6420 Flora Avenue, Seattle.

Bell, Frank J., 5216 Myrtle Street, Seattle.

Benson, E. G., 3600 Montlake Boulevard, Seattle.

Bonnell, J. J., 2601 East Galer Street, Seattle.

Burns Floral Co., 601 Third Avenue, Seattle.

Buxton, A. E., 7332 Wilson Avenue, Seattle.

Capital Hill Floral Co., 1524 Fifteenth Street North, Seattle.

Carver, Gleason A., 2324 North Fifth Street, Seattle.

Christopher Nurseries; John A. Stewart and Son, Christopher.

Davis, W. H., Kirkland.

Domeyer, C., 603 Leary Building, Seattle.

Dupea, Thomas, 3829 Renton Avenue, Seattle.

East Seattle Florist; S. E. Sanford, proprietor, Seattle.

Evergreen Nursery, Third and Pine Streets, Seattle.

Fabl & Cole, 2569 Fourth Street West, Seattle.

Fremont Floral Co., 1401 Trenton Street, Seattle.

Friday, H. E., Green Lake Station, Seattle.

Furuya Co., M., Inc., 2160 Second Avenue South, Seattle.

Gerhardt, O., Box 76, Riverton.

Goodsack, E. H., 5639 Holly Street, Seattle.

Hansen, H. M., 5639 California Avenue, Seattle.

Hollywood Gardens, Inc., 1534 Second Avenue, Seattle.

Hopkins, J., Vashon.

Island Nurseries and Fruit Farm, Vashon.

Lake Burren Nursery; Charles Schoening, proprietor, Seattle.

Lakeview Nursery, 1601 Fifteenth Avenue North, Seattle.

Lange, Paul E., 6813 Weeding Place, Seattle.

Latona Floral Co., 347 East Sixty-fifth Street, Seattle.

Lilly Co., Chas. H., Seattle.
 Lindley Nurseries; H. M. Lindley, proprietor, Seattle.
 Madlem, Isaac F., 1208 Denny Way, Seattle.
 Malmo, Chas., 3100 Rainier Boulevard, Seattle.
 Matsuda, T., 6702 Fourteenth Northwest, Seattle.
 McClimans, D. and Linnian M., 5401 Ravenna Avenue, Seattle.
 McCoy, C. E., 4839 Brandon Street, Seattle.
 McCoy, L. W., 900 Second Avenue, Seattle.
 Melby's Floral Shop, 218 Pike Street, Seattle.
 Metzger, Frank, 3510 Holly Street, Seattle.
 Mochizuki, B., 5802 Ashworth Avenue, Seattle.
 Mochizuku, S. K., R. F. D. No. 1, Box 305, Seattle.
 Morgan, H. C., 3540 Kenyon Street, Seattle.
 Morita, M., R. F. D. No. 5, Box 388, Seattle.
 Neuse, Carl, 507 Thirty-fifth Avenue, Seattle.
 Newell, Mrs. A. B., Kirkland.
 Nishitani, D., R. F. D. No. 1, Box 92, Seattle.
 Northwest Rose Co., Stall 38, Economy Market, Seattle.
 Numakami, K., 602½ North Eighty-seventh Street, Seattle.
 O'Brien, Philip D., 3118 Yesler Way, Seattle.
 Pederson, Lambert E., 2583 Seventh Street, Seattle.
 Puget Sound Nursery and Seed Co., 1622 Fourth Avenue, Seattle.
 Queen City Floral Co., 1223 East Union Street, Seattle.
 Rainier Floral Co., 500 Nevada Street, Seattle.
 Rosala, Felix, 1000 Third Avenue, Seattle.
 Saito, K., R. F. D. No. 1, Box 352, Green Lake Station, Seattle.
 Sanved Nursery Co., 1803 Thirty-eighth Street North, Seattle.
 Scott & Son, 6533 Wilson Avenue, Seattle.
 Seattle Floral Co., Fourth Avenue and Denny Way, Seattle.
 Seattle Nursery Co., 4520 Sunnyside Avenue, Seattle.
 Sheffield, Mrs. Geo., R. F. D. No. 1, Burton.
 Slauson, H. B., 5416 Morgan Street, Seattle.
 Stuber & Richardson, 4852 Holly Street, Seattle.
 Sullivan, Chas. E., 1510 Third Avenue, Seattle.
 The Burdett Co., First and Denny Way, Seattle.
 The Sunset Nursery, 4323 Fifth Street Northwest, Seattle.
 The Yokohama Nursery, Ltd., L. C. Smith Building, Seattle.
 Thomas Floral Co., 1003 Third Avenue, Seattle.
 Turner, Garrison, 4320 Fourteenth Avenue Northeast, Seattle.
 U. S. Trading Co., Pacific Building, Seattle.
 University Floral Shop, 4309 Fourteenth Avenue Northeast, Seattle.
 University Nursery and Greenhouse, 4008 Ninth Avenue Northeast, Seattle.
 Waight, Chas. H., 252 North Seventy-eighth Street, Seattle.
 Washington Floral Co., 1516 Fortieth Street North, Seattle.
 Weissman & Strander, 1905 Fifth Avenue, Seattle.
 Whendon, P., Kirkland.
 Whitney, F. A., 3846 Thirty-fourth Avenue West, Seattle.
 Wylie, Thomas, florist, 5138 Holly Street, Seattle.
 Vashon Garden Company, Vashon.

Kittitas County—

Moffet, Fred I., R. F. D. No. 1, Ellensburg.

Klickitat County—

White Salmon Nursery; Horace E. Wray, proprietor, Klickitat.

Lewis County—

Wibra, G. I., 1530 Market Street, Chehalis.

Mason County—

Brown, E. E., Detroit.

Pierce County—

Evergreen Nursery; W. H. Biddle, proprietor, 1101 South Stevens, Tacoma.
 Mainke, H. W., 1219 Sixth Avenue, Tacoma.
 McCormack Bros., Pacific and Fifteenth, Tacoma.
 Pudur, O. M., Puyallup.
 Puyallup Nursery; A. Lingham, proprietor, Tacoma.
 Rosecraft Fruit Farm; F. H. Brugelhaus, proprietor, Sumner.
 Woodland Park Floral Co., Sumner.
 Woolworth, F. W. & Co., 1106 Pacific Avenue, Tacoma.

Skagit County—

Mt. Vernon Nurseries; E. B. Chenoweth, proprietor, Mt. Vernon.
 Wingren, O. J., La Conner.

Snohomish County—

Boyd Nursery Co., Everett.
 Broadway Floral Co., Everett.
 City Floral and Seed Co.; W. Wallmark, proprietor, Everett.
 Everett Floral Co., 1814 Hewitt Avenue, Everett.
 Meadowdale Nursery; P. H. Burdett, proprietor, Edmonds.
 Ricketts, W. J., Snohomish Nursery, Snohomish.

Spokane County—

Burt, Albert J., Clemmer Theatre Building, Spokane.
 Driscoll, James, 11 West Main Avenue, Spokane.
 Hoyt Bros. Co., 11 Post Street, Spokane.
 Kelly, A. A., nurseryman and gardner, Station B, Spokane.
 Krause, H. E., R. F. D. No. 8, Spokane.
 Overman's Nursery, 29 Monroe Street, Spokane.
 Reimer's Floral Art Shop, 807 Riverside, Spokane.
 Riverside Nursery, R. F. D. No. 10, Hillyard.
 Rosalia Nursery; L. S. Kimm, proprietor, Rosalia.
 Spokane Nursery, South 2009 Grand Boulevard, Spokane.
 Spokane Seed Company, Inc., Spokane.
 The Northern Nursery, West 1104 Carlisle Avenue, Spokane.
 Turnley, J. H. & Son, North 801 Monroe Street, Spokane.
 Westlake, T. E., care Westlake Public Market,

Thurston County—

Capital City Nurseries and Greenhouse; C. Klam, proprietor, Olympia.

Walla Walla County—

Blossom Floral Co., Walla Walla.
 Young & Lester, Walla Walla.

Whatcom County—

Cornwall Park Nursery and Floral Co.; A. Allenbach, proprietor, Bellingham.
 Ferndale Nursery; J. J. Rowe, Manager, Whatcom.
 Horst's Floral Shop; Fred F. Horst, proprietor, Whatcom.
 Kincaid, J. W., Bellingham.
 McCormick, H. B., Bellingham.
 Smith, John W. Macrae, 2315 Williams Street, Bellingham.
 Thomas, Rockwell H., 1208 Sixth Street, South Bellingham.

Yakima County—

Downs, Warren, 409 South Fourth Street, Yakima.
 Hamilton Nursery Co., Yakima.
 Ornamental and Fruit Nursery Co.; John Ryken, manager, Wapato.
 Simpson, Chas. S., R. F. D. No. 1, Box 158, Yakima.
 Tate, C. P., Grandview.
 Toppenish Nursery Co., Inc., Toppenish.
 Washington Nursery Co., Toppenish.
 Yakima & Columbia River Nursery Co., 210 Miller Building, Yakima.
 Yakima Valley Nursery Co., Inc., Toppenish.

Out of State—

Albany Nursery Co., Albany, Ore.
 Birchler, H., 1406 East Stark Street, Portland, Ore.
 Bobbink & Atkins, Rutherford, N. J.
 Burbank, Luther, Santa Rosa, Cal.
 Butzer, J. J., 188 Front Street, Portland, Ore.
 Carlton Nursery Co.; F. and A. D. Brooks, proprietors, Carlton, Ore.
 Capitol City Nursery Co., Salem, Ore.
 Dreer, Henry A., 714 Chestnut Street, Philadelphia, Pa.
 Eastern Nurseries; Henry S. Dawson, proprietor, Holliston, Mass.
 Kellogg, R. M., Co., Inc., Three Rivers, Mich.
 Lewiston Flower Shop, Lewiston, Idaho.
 Milton Nursery Co., Milton, Ore.
 Oregon Nursery Co., Orenco, Ore.
 Pacific Nursery Co., Inc., Portland, Ore.
 Pilkington, J. B., P. O. Box 242, Portland, Ore.
 Portland Seed Co., Inc., Front and Yamhill Streets, Portland, Ore.
 Portland Wholesale Nursery Co., 112½ Grand Avenue, Portland, Ore.
 Quaker Nurseries; C. F. Lansing, proprietor, Salem, Ore.
 Routledge Seed and Floral Co., Inc., 169 Second Street., Portland, Ore.
 Russellville Nurseries, Inc., R. F. D. No. 1, Box 265, Portland, Ore.
 Salem Nursery Co., Inc., Salem, Ore.
 Silva-Bergtholdt Co., New Castle, Cal.
 Sonderegger Nurseries and Seed House, Beatrice, Neb.
 Stark Bros. Nurseries and Orchard Co., Inc., Louisiana, Mo.
 Sherbrooke, W. E., Cornelius, Ore.
 Taylor, H. S. Co., Rochester, N. Y.
 The Villa Nursery, R. F. D. No. 1, Box 395, Portland, Ore.
 True-to-Name Nursery, Inc.; H. S. Galligan, proprietor, Hood River, Ore.

NURSERY STOCK INSPECTED 1916.

D Indicates domestic, F foreign.

COUNTIES	Apples	Pears	Peach's	Plums and Prunes	Apri-cots	Cher-ries	Quinces	Nuts	Grapes	Rasp-berries	Black-berries	Straw-berries	Miscel-laneous Berries	Miscel-laneous Roots	Orna-mental Trees, Shrubs, Vines
Adams.....	448 D	264 F	54 F	204 D	129 D	483 D	1 F	24 F	100 D	138 D	22 D	387 D	158 D	.....	3,729 D
Benton.....	53 D	6 D	.....	12 D	13 D	8,011 D	6 D	76 D	2,689 D	75 D	.....	12 D	62 D	.....	29 D
Benton.....	1,802 D	350 D	99 D	1,191 D	468 D	8,011 D	6 D	76 D	2,689 D	75 D	.....	1,588 D	62 D	.....	190 D
Chelan.....	837 D	8 D	211 D	1,715 D	20 D	883 D	2 D	23 D	12 D	10 D	.....	2,389 D	108 D	.....	421 D
Chelan.....	1,114 D	162 D	52 D	70 D	62 D	110 D	4 D	102 D	2,103 D	671 D	38 D	7,513 D	88 D	.....	198 D
Chelan.....	D	4	502	1,201	50	6	.....	.....	.....	2	.....	4,239	55	.....	207
Oallam.....	432 D	60 D	30 D	1,114 D	15 D	194 D	3 D	63 D	9 D	788 D	66 D	3,203 D	170 D	72 D	213 D
Oallam.....	91 D	2 D	.....	18 D	.....	7 D	.....	.....	.....	25 D	.....	4,203 D	125 D	90 D	.....
Clarke.....	176 D	25 D	93 D	320 D	17 D	94 D	3 D	15 D	2,432 D	53 D	30 D	4,203 D	91 D	12 D	653 D
Columbia.....	106 D	261 D	68 D	2,483 D	8 D	96 D	1 D	7 D	1,682 D	57 D	.....	9,426 D	10 D	209 D	200 D
Columbia.....	406 D	88 D	478 D	2,367 D	67 D	262 D	4 D	23 D	1,135 D	167 D	53 D	887 D	204 D	81 D	616 D
Cowlitz.....	14 D	.....	.....	2 D	.....	3 D	.....	.....	4 D	.....	.....	10 D	.....	70 D	62 D
Cowlitz.....	38 D	12 D	25 D	11 D	.....	23 D	1 D	6 D	.....	.....	10 D	572 D	.....	70 D	21 D
Cowlitz.....	40 D	11 D	33 D	16 D	.....	19 D	2 D	20 D	25 D	5 D	14 D	730 D	.....	125 D	3 D
Douglas.....	105 D	87 D	21 D	36 D	13 D	131 D	1 D	.....	.....	6 D	78 D	1,200 D	12 D	.....	1,438 D
Douglas.....	185 D	42 D	18 D	13 D	2 D	6 D	.....	2 D	2 D	10 D	.....	1,568 D	55 D	.....	15,232 D
Ferry.....	23 D	1 D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ferry.....	23 D	1 D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Franklin.....	91 D	22 D	46 D	35 D	46 D	74 D	3 D	25 D	3,509 D	75 D	18 D	925 D	.....	.....	.....
Franklin.....	146 D	41 D	68 D	36 D	18 D	96 D	6 D	.....	.....	119 D	.....	116 D	25 D	100 D	1,885 D
Garfield.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grant.....	663 D	48 D	35 D	34 D	567 D	125 D	2 D	15 D	2 D	23 D	2 D	100 D	.....	.....	6 D
Grant.....	136 D	25 D	6 D	51 D	13 D	60 D	1 D	4 D	70 D	44 D	12 D	82 D	15 D	380 D	8 D
Grave Harbor.....	209 D	20 D	24 D	23 D	62 D	44 D	.....	.....	30 D	55 D	.....	1,000 D	8 D	351 D	14 D
Grave Harbor.....	60 D	13 D	8 D	26 D	6 D	20 D	.....	.....	1 D	55 D	6 D	4,925 D	8 D	103 D	6 D
Island.....	301 D	103 D	95 D	107 D	81 D	337 D	14 D	10 D	20 D	44 D	35 D	2,478 D	152 D	63 D	1,194 D
Island.....	5 D	.....	1 D	1 D	.....	2 D	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jefferson.....	208 D	63 D	88 D	54 D	7 D	93 D	5 D	5 D	29 D	98 D	2 D	1,705 D	65 D	.....	61 D
Jefferson.....	8 D	.....	.....	2 D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
King.....	2,738 D	1,112 D	98 D	270 D	40 D	1,406 D	24 D	44 D	71 D	564 D	31 D	3,415 D	55 D	.....	7 D
King.....	1,755 D	176 D	263 D	838 D	140 D	838 D	78 D	203 D	203 D	100 D	.....	11,099 D	840 D	408 D	4,942 D
Kittitas.....	521 D	145 D	91 D	187 D	51 D	255 D	8 D	21 D	23 D	791 D	515 D	10,225 D	209 D	233 D	1,439 D
Kittitas.....	12 D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kittitas.....	12 D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kitsap.....	1,066 D	71 D	150 D	113 D	9 D	276 D	12 D	8 D	104 D	141 D	4 D	4,000 D	106 D	214 D	122 D
Kitsap.....	46 D	1 D	4 D	10 D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kitsap.....	1,255 D	554 D	51 D	52 D	57 D	149 D	3 D	122 D	49 D	306 D	123 D	3,223 D	71 D	150 D	143 D
Klickitat.....	61 D	8 D	17 D	221 D	35 D	40 D	4 D	651 D	21 D	71 D	10 D	3,842 D	3 D	244 D	186 D

NURSERY STOCK INSPECTED 1916.—Concluded.

COUNTIES	Apples	Pears	Peach's	Plums and Prunes	Apri-cots	Cher-ries	Quinces	Nuts	Grapes	Rasp-berries	Black-berries	Straw-berries	Miscel-laneous Berries	Miscel-laneous Roots	Orna-menta-l Trees, Shrubs Vines	Miscel-laneous
Lewis.....	776	217	124	175	21	298	19	15	38	498	40	3,320	235	100	117	13
Lincoln.....	287	23	16	23	14	44	1	1	4	4	12	6,006	12	228	1,045	56
Mason.....	1,202	294	261	400	139	705	15	19	132	652	96	1,240	253	147	8,343	56
Okanogan.....	47	60	80	29	82	60	2	3	3	3	12	1,400	83	10	1,100	5
Pacific.....	126	18	1	3	3	5	5	8	25	348	114	1,250	144	81	756	8
Pend Oreille.....	8,875	181	56	91	20	322	7	70	201	82	95	2,570	2	107	174	83
Pierce.....	309	22	12	16	5	71	4	6	14	55	21	3,261	151	6	163	8
San Juan.....	234	95	6	22	1	29	1	1	71	27	53	8,315	162	87	235	8
Skagit.....	100	15	10	46	3	130	1	8	76	527	111	9,417	337	110	14	81
Stamania.....	80	50	24	159	23	130	1	35	74	807	15	1,710	4,901	574	1,741	6
Spokane.....	1,017	482	104	243	40	618	24	5	798	146	544	6,050	62	824	61	7
Stevens.....	502	186	55	508	1	250	1	2	6	24	6	2,450	232	55	228	27
Thurston.....	100	102	10	23	46	172	5	2	2	10	84	5,000	232	136	339	2
Wahkiakum.....	806	218	532	295	51	442	36	27	44	374	95	5,250	42	129	108	15
Walla Walla.....	43	7	64	64	16	16	16	1	31	113	71	6,324	444	100	458	8
Whatcom.....	55	213	14	4	6	26	26	66	115	510	20	1	6,050	203	143	15
Whitman.....	1,031	296	295	466	152	812	36	1	19	20	1	4,029	232	74	2,072	8
Yakima.....	423	170	164	466	111	336	17	44	216	79	173	25,127	400	162	975	6
Totals.....	95	24	29	27	9	20	2	6	6	51	44	755	57	35	138	6
	34	10	7	26	3	25	1	2	15	52	10	1,236	90	58	109	9
	310	129	37	49	3	44	1	2	11	52	6	734	90	95	68	68
	72	28	10	37	3	30	105	153	6	31	16	2,564	1,277	163	131	131
	10	3	2	6	10	75	2	7	8	110	194	1,712	82	465	98	9
	239	24	80	1,197	10	2	12	14	404	27	1	10,439	254	62	183	6
	13	320	47	160	9	255	63	194	23	256	3	9,897	836	92	3,364	49
	566	8	10	29	7	132	11	84	424	1,623	301	16,991	863	1,081	1,005	49
	1,451	302	335	451	265	742	16	27	31	106	4	2,515	160	279	133	93
	60	68	44	32	27	16	11	479	2,174	110	56	6,140	858	386	1,312	93
	4,066	7,289	2,466	6,096	327	1,621	105	153	79	414	3,174	7,892	1,277	1,277	1,333	682
	444	4	1,009	1,453	16	551	681	2,650	19,496	11,775	8,174	50,003	13,610	12,221	57,332	682
Totals.....	35,336	14,478	8,650	24,396	3,289	21,096	681	2,650	19,496	11,775	8,174	50,003	13,610	12,221	57,332	682

NURSERY STOCK INSPECTED 1917.—Concluded.

COUNTIES	Apples	Pears	Peach's	Plums and Prunes	Apri-cots	Cher-ries	Quinces	Nuts	Grapes	Rasp-berries	Black-berries	Straw-berries	Miscel-laneous Berries	Orna-mental Trees, Shrubs, Vines	Garden Roots	Peren-nia's and Miscel-laneous
Lewis.....	D 367	66	20	99	23	3,075		57	46	63	30		48	427	55	8
Lincoln.....	D 54	10	2	15	6		1					350	599	569	315	83
Mason.....	D 73	64	312	25	37	23	5	1		161		600	160	57		25
Okanogan.....	D 75	18	22	23	9	31	5	23	47		8	16	20	22	9	5
Pacific.....	D 895		12	6	6	10	3		59	20		351		35	105	11
Pend Oreille.....	D 9	3		6		1			11	10		1,315	24	324	16	5
Pierce.....	D 27	4		25		13				68		371		11	30	
Pierce.....	D 182	23	52	38	2	49	2	10	37			1,350	38	37		11
San Juan.....	D 745	155	44	217		507	20	3	2,410	1,462	1,100	819	2,086	3,035	103	1,378
Skagit.....	D 188	166	16	41	8	91	7	17	5	233		3,539	62	249		3
Skamania.....	D 321	2	8	13	10	306			4	23		483	431	97	102	43
Snohomish.....	D 193	89	26	2	4	3	5	10		12		300	12	40	100	3
Spokane.....	D 33	6	1	10		24		6	2	132		212	5	38		14
Stevens.....	D 63	19	16	20	2	45		8	8	59		12	17	141	257	401
Thurston.....	D 867	237	8	707	103	386	2	4	150	164	200	3,047	1,602	693	2,414	190
Wahkiakum.....	D 8	12		4										4		
Walla Walla.....	D 75	8	6	1	1	23			10	22		2,199		21	55	
Whatcom.....	D 489	182	29	197	15	304	12	40	97	513	188	3,950	2,174	96		14
Whitman.....	D 39	38	14	73	2	174	5	2	8	106	13	1,011	59	64	200	18
Yakima.....	D 6	1	5	23				6		6	1	1		1		2
Yakima.....	D 27	15	20	24	6	32	6	5						6		2
Yakima.....	D 83	10	37	102	2			37	1,086	10		872	10	23	16	62
Yakima.....	D 283	240	18	53	45	191	7	41	16	791	66	952	293	694		6
Yakima.....	D 206	614	5	107	5	244	1	1	30	156	12	2,487	2,714	1,390	75	796
Yakima.....	D 33	39	1	15	5	37			6			100		42	73	1
Yakima.....	D 146	22	6	65	31	97	2		136	24	9	839	64	234	90	53
Yakima.....	D 4,546	15,206	1,705	19,766	390	2,894	106	394	3,906	554	153	3,590	4,857	855		223
Totals.....	30,340	20,811	3,601	31,967	2,101	12,664	270	887	11,449	8,311	1,967	43,459	15,255	12,015	5,146	5,238

POTATO INSPECTION.

No branch of the inspection work is given closer attention than is the potato inspection, especially that part of it in connection with the inspection of California potatoes against the introduction of the potato tuber moth.

For four consecutive years Mr. F. N. Rhodes, inspector of the ninth district, has spent from four to eight weeks in California in the tuber moth infected districts inspecting shipments destined for Washington and other northern sections. Realizing what the injury to the early potato trade in Seattle and other points would be if the state placed an embargo upon California potatoes for its own protection, the dealers and commission merchants guaranteed to furnish expense funds for the maintenance of Mr. Rhodes in California during the shipping season of early potatoes, for the purpose of inspecting all shipments destined for Washington and other northwestern points. Their request has been granted. During his four years' work in the California fields we have been able to prevent any known infestation to become established in this state. Mr. Rhodes' personal report for 1918 explains the situation in detail:

Seattle, Washington, September 24, 1918.

Mr. M. L. Dean,
Chief, Division of Horticulture,
Olympia, Washington.

Dear Mr. Dean: I left Seattle, May 17th, 1918, for San Francisco, driving a Ford touring car from there to Los Angeles, a distance of 440 miles, going via Stockton, Merced, Fresno, and Bakersfield, arriving at Los Angeles May 23d, and inspected the first car of potatoes the following day. I saw from the very first inspections that the tuber moth was to be much more serious than any of the other three years I had been in California. During my five weeks' stay in the southern part of the state I visited and inspected many potato fields as well as carloads in the vicinity of Los Angeles, Beuna Park, Norwalk, Stanton, Fullerton, Anaheim, El Monte, Savannah, Baldwin Park, Arcadia, Pomona, Ontario, Chico, Upland; several places in San Bernardino County as far up as San Jacinto, a distance of about 120 miles from Los Angeles, also many potato growing sections in what is known as the San Fernando Valley. I traveled by auto about 3,000 miles from Los Angeles, Orange, and San Bernardino counties. By having my auto with me I was able to cover a great deal more ground this year than other years when I had to depend on being taken to the different districts where cars were being loaded by the shippers. I was asked to pass on a field of twenty-seven acres of potatoes at Pacomia in the San Fernando Valley, and upon inspection found the potatoes so badly infected with tuber moth as to be nearly worthless. This Japanese grower had paid \$2.00 per sack for his seed, the field would average fifty sacks to the acre, yet he lost 90 per cent of the entire crop because of the serious tuber moth infection, many of the potatoes having as many as fifteen larva in them, and they were surely unfit for human consumption. I saw several fields of potatoes in the same district which were also in very bad condition. This district had tuber moth every year. Had the conditions this season been such that the movement of Southern California potatoes had been slow there certainly would have been a large loss from tuber moth, but the demand was strong and potatoes moved out fast.

I invariably found that the principal causes for tuber moth infection in Southern California to be: First, shallow planting, exposing the potatoes to attacks of the adults of moths which are night flyers and at which time many of the eggs are deposited on the exposed potatoes. Potatoes grown on heavy, cloddy land which bakes and cracks would invariably be found to be infected, and shallow planting on fine sandy soil would occasionally show some infection, but where the potatoes were on sandy soil and five and six inches deep,

which was the case in a number of places, there was little and no infection in the early crop because neither the moth or the larva can get at them at this depth. I do believe that were potatoes in Southern California planted four to six inches in depth and grown only on fine sandy soil and when dug put in new bags, and taken off the field the same day, or else kept well covered, there would be little or no trouble on account of tuber moth. I have seen two fields of potatoes separated only by the highway, the soil in one field was fine sand and showed no tuber moth whatever; the soil in the other field was heavy, had become baked and cracked, giving the moth and larva an easy access to the potatoes, and these certainly were quite wormy. These southern potatoes should be dug and marketed as soon as they will stand shipment, and should not be held at all.

In San Joaquin County, where potatoes are grown on the delta or what is known as river lands, where plenty of water is usually to be had, I seldom found the tuber moth in the early potatoes, but when grown on the higher dry lands where water is not plentiful they generally show some infection. San Joaquin County potato acreage this year is 20,000 acres, against 25,000 acres in 1917, and the average yield will go 125 sacks per acre, and I understand Geo. Shima, the California potato king, as he is termed, controls 7,500 acres out of the 20,000 acres. The yield in the Los Angeles district is not more than thirty to thirty-five sacks per acre.

I issued certificates as to the freedom from tuber moth on 206 carloads of spuds which were shipped to Washington, Oregon, Utah, Montana, Idaho, and Texas, and refused certificates on forty-five cars and in addition examined about twenty-five cars which were finally not shipped into territories requiring certificates. Figuring on an average of ten sacks cut and examined to each car I examined a total of 2,750 sacks, many times examining nearly all the potatoes in a sack. On a money basis of \$800.00 per car right through, the total value of potatoes examined would be \$220,000.00. Many cars of potatoes this season were from ten to eighteen days in transit to Washington points, when seven, eight, and nine days should have been the limit of time in transit. When a car of potatoes was inspected and passed at shipping point and reached destination in this state in six or seven days there would be little or no danger of eggs hatching and potatoes becoming infected in transit, but when a car is eighteen days in transit, as was the case in one car, there can be no assurance that potatoes would arrive at destination free from infection. California potatoes, especially, certainly should never be delayed in transit where it was possible to get them through, because aside from the danger of tuber moth hatching in transit the disease known there as "leakers" develops very fast in cars delayed in transit. Two years ago the icing of Southern California potatoes was unknown; this year practically all southern stock moved to market under ice, which was a saving of many thousands of dollars to growers and shippers.

This year there were many more small potato growers in Southern California than other years, and a number of cars of potatoes contained as many as eight different growers, thereby making the thorough examination of a carload next to impossible.

For thorough inspection purposes not more than three to five different growers should be allowed in the same car, and then only one grower's stock on the floor of the car and the other grower's stock on the top decking and each lot marked, number of sacks, etc., so as to distinguish one from the other. Two certificates should be issued, one to attach to bill of lading, the other securely tacked on the inside of the car door.

The season is now over for California potatoes, and from the first shipment in May to date, Seattle received 254 carloads.

Yours truly,
(Signed) F. N. RHODES,
Horticultural Inspector.

"Safety First" is the motto for the State of Washington in connection with this tuber moth situation. We are yet free of this dangerous pest, and unless California revamps her laws so that thorough, drastic inspection by the state

officials can be given, it will be necessary for Washington to adopt rigid measures for our own protection, even to the extent of placing an embargo upon all potatoes produced in the State of California.

Occasionally shipments have been sent from points which Mr. Rhodes could not reach. This season several cars were received with certificates of county inspectors attached, which were so seriously infected that they were either returned to the shipper at his expense, or diverted to other states, or confiscated. The state inspection authorities of California should have jurisdiction over these matters for their own protection.

FEDERAL GRADES.

The federal grading of potatoes was brought to the attention of the growers and dealers during the season of 1917. In co-operation with the state division of farm markets, under the direction of Mr. Asher Hobson, located at Pullman, inspection of car lot shipments was advocated and upon request of the grower, shipper, or dealer, inspection service was rendered.

The federal grading of potatoes is an advanced step toward better marketing conditions. The time is at hand when all farm products should be marketed under standard grades.

THE COLORADO POTATO BEETLE.

In July, 1916, an outbreak of the Colorado potato beetle was reported from Sunnyside.

Immediate attention was given the matter under the direction of F. E. De Sellem, who was then district inspector of district No. 5, in which the outbreak occurred. A force of men was put into the potato fields picking and destroying all adults, larvae, or eggs found. The potato fields were also carefully sprayed with arsenical sprays. A protective potato association was organized in the district and through their efforts in assisting the inspection force the work was very thoroughly carried out in 1917, with the result that but very few adults, larvae, or eggs were found. In 1918 none were found in that district, but in the second district in the vicinity of Walla Walla, an outbreak was discovered. Harry L. Miller, district inspector of that district, immediately took drastic measures, having all the fields and adjoining territory carefully gone over, and all fields of potatoes in which the beetles were found were thoroughly sprayed with arsenate of lead.

From these occurrences it is evident that similar outbreaks of this pest are likely to occur and it behooves every potato grower to report any findings of the pest at once to this department in order that measures may be taken to prevent its spread. Each year that this pest is kept out of the potato fields of Washington means the saving of thousands of dollars to the growers in the cost of spray machinery, material, and labor.

The commercial shipments of potatoes for the year 1917 as reported by the several railroads in the state was 3,148 carloads, representing about 2,500,000 bushels. The value of this crop based upon the prices received represents an income that should not be placed in jeopardy by the activities of the Colorado potato beetle.

GRADE AND PACK CONFERENCE.

Under the provision of the law which provides for the grade and pack conferences, a meeting of growers and delegates was held at Spokane, November 25, 1916, at which time the regulations were formulated for the pack of 1917.

November 23, 1917, a similar meeting was held at the same place, at which time the 1917 grade and pack regulations were adopted for the 1918 crops. A very interesting discussion of "Federal Grades," promulgated by the Federal Bureau of Markets, was had during the meeting. Mr. S. H. Boddinhouse represented the federal department, and after freely and fully placing the matter before the meeting, promised further investigation of the question in other apple producing sections, hoping that in the near future federal apple grades would be nationally adopted.

STORAGE.

That proper storage facilities is one of the important adjuncts to the fruit industry cannot be denied. In all of the fruit districts of the state there should be more up-to-date storage plants.

It is not necessary that they be expensive iced storage structures, because frost-proof houses are being built with air-cooled ventilating systems which are giving satisfactory results.

In 1917 there were many more storage plants built, including commercial plants and common air-cooled houses in the different valleys than had ever been built in the state during a single season. Weather conditions and car shortages made the demand for more and better storage facilities imperative. Heavy losses during former shipping seasons were the result of insufficient storage facilities, and had it not been for the war conditions many houses of different types would have been built in 1918. There were some built.

The fruit tonnage is gradually increasing in the fruit sections, which makes a demand for increased storage facilities.

The following data was gathered during 1917, showing the available storage facilities and its distribution throughout the state:

STORAGE CAPACITY REPORT.

DISTRICT	Number Houses	ICED STORAGE		Temporary or Common Boxes	FROST PROOF	
		Boxes	Sq. Ft.		Boxes	Sq. Ft.
1.....	29	.....	256,140	242,000	185,500	.....
2.....	12	.....	57,832	.....	30,000	121,300
3.....	20	19,000	.....	.....	188,000	.....
4.....	68	.....	.....	.....	1,875,000	.....
5.....	64	1,896,500	.....	24,000	1,568,000	.....
6.....	7	.....	.....	.....	17,000	.....
7.....	.....	.....	.....	.....	.....	.....
8.....	5	108,000	40,967	.....	.....	150,000
9.....	4	528,500	202,045	26,373,900	.....	163,070
10.....	.....	.....	.....	.....	.....	.....
Totals.....	209	2,542,000	300,844	26,639,900	3,864,460	334,370

GREENHOUSES.

The greenhouse interests of the state are becoming to be of a considerable magnitude. Specialized florists are the greatest in number, yet many are growing both flowers and vegetables, some growing vegetables exclusively.

The growing of rhubarb and asparagus under glass or in sheds is very remunerative in several sections of the state.

The following table shows the value of the greenhouse industry to the state:

GREENHOUSE REPORT.

DISTRICT	Number of Green-houses	Assessed Valuation	Square Feet Glass	Volume of Business in 1917
1.....	8	\$68,185 00	199,350	\$82,845 63
2.....	23	88,211 00	339,500	124,650 00
3.....	1	800 00	1,800	1,200 00
4.....	1	2,010 00	3,500	20,000 00
5.....	4	27,330 00	96,000	24,600 00
6.....	4	2,650 00	15,800	8,500 00
7.....	9	18,600 00	89,100	22,200 00
8.....	23	37,575 00	383,464	67,781 00
9.....	66	334,380 00	714,850	237,939 71
10.....	10	12,020 00	153,900	39,700 00
Totals.....	149	\$594,811 00	1,996,764	\$627,416 34

FRUIT PRODUCTS.

Probably no branch of the fruit industry has been more neglected in this state than that of the manufacturing of fruit products. There was a great development of these interests in 1917 and many plants of various kinds were put into operation. New canning plants, evaporators, juice factories, cider mills, and factories for the making of various other fruit products were built in many parts of the state. Where new factories were not built, unused buildings were remodeled and made into successful plants, until now there is a sufficient capacity for the manufacturing of these products to create a demand for all cull fruit in the state at remunerative prices. More plants are contemplated and in the process of construction for the 1919 campaign.

In 1915 cull fruit for cider purposes brought to the grower about \$4.00 per ton. In 1917 it ranged in price from \$7.00 to \$10.00 per ton, some factories paying as high as \$15.00 per ton and sent auto trucks to the orchards after them. The 1918 culls are bringing from \$8.00 to \$25.00 per ton, depending upon quality. The development of this branch of the fruit industry placed upon the market finished products which brought into the state several millions of dollars, and makes a home market for a grade of fruit which heretofore has been nearly a total loss to the grower.

The following table gives an idea of the scope of the industry. Yet it is difficult to get the tonnage consumed each year because of the rapid increase in the number of plants. At Sumner and Puyallup extensive canning plants have been in operation for several years. There is also a branch of

this concern operating in Spokane. Libby, McNeill & Libby erected a large factory at Yakima in 1917 which consumed vast quantities of apples, pears, cherries, peaches, plums, apricots, and beans. Other products will be used by this plant as its equipment can be increased. There is also an extensive canning plant at Vancouver, and many smaller plants can be found in different parts of the state. The Washington Evaporated Food Company erected a large, commodious evaporating plant at Yakima in 1917 which consumed vast quantities of cull apples and vegetables. After the fruit season ended this plant did an extensive business in the evaporating of potatoes.

The largest fruit juice factory is at Olympia. They have a capacity of four to six thousand tons of apples annually. There are many other small cider and vinegar plants in the state:

FRUITS CONSUMED FOR BY-PRODUCT PURPOSES IN 1916 AND 1917.

(Tons)

District and Year	Apples	Pears	Peach's	Plums, Prunes	Apri- cots	Straw- berries	Black- berries	Rasp- berries	Cher- ries	Grapes	Logan- berries	Small Fruit	Miscel- laneous
District 1—													
1916.....	632	18	2						30				
1917.....	306												
District 2—													
1916.....	5,957	12		20		24			92			13	
1917.....	3,627												
District 3—													
1916.....	141				71½					43			
1917.....	140									205			
District 4—													
1916.....	4,186												
1917.....	2,261	10	17										
District 5—													
1916.....	2,010												
1917.....	15,733	1,365	966						8,133				
District 6—													
1916.....	300	45		10	7	9	9	5	34		15		11
1917.....	450	70		40		30	12	16	39				
District 7—													
1916.....	300	150	30	110	15	150	90	45	165	15	90	92	71
1917.....	460	180		300		180	150	75	375	45	75	19	
District 8—													
1916.....	2,490	183	1			221	1,023	1,490	111				374
1917.....	2,518	150	68	31		160	1,024	450	164			58	231
Districts 9 and 10—													
1916.....	686	306½	3	6	20	55	31	156	109	14	53		53
1917.....	1,778	434	29	35	150	110	86	33	270	44	11		

FRUIT EXPORTS.

In the value of production among the orchard fruits of the State of Washington the apple ranks first, the pear second, prune third, and the peach and cherry are close competitors for the next place. The apple has a wider range of adaptability than any of the other tree fruits and can be successfully grown under conditions which are directly adverse to some of the other fruits.

The age of the oldest apple trees in the state date back to the years 1825 and 1835. It is not difficult to find fruit trees in several parts of the state in good condition which were planted about that time. In 1854 a nursery was established near Olympia, where apple trees and other nursery stock was grown. In 1849 grafted fruit trees were generally distributed from this territory over the western part of the state. At that time about every variety known to the people living in the country was propagated and sold; hence there is a wider range of varieties in the older orchards. During the rapid development of the apple industry in the central and eastern portions of the state, beginning about 1900, the bulk of the trees in the state were planted, and the list was restricted to commercial varieties. The height of planting was reached in 1908 to 1910, and since that time planting has gradually dropped off until now the trees planted each year about equals those being taken out by natural conditions or otherwise. Of course, there are intermittent periods of activity in the planting of other tree fruits.

In 1910 Washington ranked sixteenth in importance as a fruit growing state, New York standing No. 1 and Missouri second from the standpoint of production. In 1917 Washington took the first place and produced more than a half million boxes more than New York and Virginia combined, which represented 19 per cent of the commercial crop of the country and 53 per cent of the boxed apple crop.

The commercial crop, indicated by the carloads for 1916 and 1917, is given in the following table; 1916 is based upon 650 boxes to the carload, 1917 at 756 boxes per car:

CARLOAD FRESH FRUIT EXPORTS FOR YEARS 1916 AND 1917.

District and Year	Apples	Peaches	Pears	Plums, Prunes	Cher- ries	Apri- cots	Grapes	Cur- rants	Goose- berries	Black- berries	Red Rasp- berries	Oran- berries	Logan- berries	Straw- berries	Canta- loupes	Mixed
District 1—																
1916.....	635	52	8	850	63	8	9									1½
1917.....	500	58	10	203	121	10	11									
District 2—																
1916.....	980		14	23	8									30		384
1917.....	472		8	15	14									8		290
District 3—																
1916.....	448	52	113	14	4	15	16							110		8
1917.....	901	170	150	7	7	6	29							50		
District 4—																
1916.....	7,721	178	343	23	93	80										
1917.....	7,225	103	275	13	85	58										588
District 5—																
1916.....	7,090	950	1,150	210	20		20									
1917.....	9,122	1,965	2,126	263	135	25	5	35								
District 6—																
1916.....	221	18	17	350*	2	6								40		8
1917.....	240	9	16	420*	1	2								35		16
District 7—																
1916.....	15	100†	8	8	7		1		8	4	1	2,000†	5	9		
1917.....	15	200†	6	10	14		2		10	7	2	3,500†	3	12		
District 8—																
1916.....	400		50	30	230			6	7	481	640		25	150		
1917.....	500		40	20	200			6	8	400	640		20	120		
District 9—																
1916.....	288	3	53	87	76				2	35	79					
1917.....	108	4	7	50	24		1		2	24	63			182		
District 10—																
1916.....																
1917.....																
Totals.....	37,426	3,571	4,394	2,091	1,109	210	94	51	37	951	1,325	5,500	156	909	225	1,296½

* Dry. † Box. ‡ Bbls.

STATE INSECTICIDE LAW.

The enforcement of the insecticide and fungicide law is a part of the duties of this division. The law creates a board, "which board shall consist of the Commissioner of Agriculture or the Assistant Commissioner, the director of the agricultural experiment station at Pullman, and three members of the agricultural experiment station to be appointed by the director, one of whom shall be an entomologist, one a plant pathologist, and one a chemist." The present personnel of the board is Prof. Geo. W. Severance, director of the experiment station; Dr. A. L. Melander, entomologist; Dr. F. D. Heald, plant pathologist; Prof. George A. Olson, chemist, and M. L. Dean, chief, division of horticulture.

All spray material sold or used in the state comes under the regulation of this board and must conform to its fixed standards. Samples may be analyzed by Chemist Geo. A. Olson, located at Pullman, at any time.

Each year the horticultural inspectors gather samples found upon the markets or in the orchards, have them analyzed, and if they are not up to requirements, their further use is prevented.

Frequently people think that they do not get proper results from the use of the spray materials which they use. If they will call the attention of the inspector of their district to the situation he will investigate the matter and determine whether the results obtained are due to adulterated material or to some other cause.

FAIRS.

As the State Fair is an adjunct to this department, the horticultural division each year installs and maintains an educational exhibit showing the different diseases and insect pests. Different spray accessories such as material and nozzles are shown; circulars and bulletins treating upon horticultural topics are freely distributed. Personal information is also given out in the way of discussion and the answering of questions.

The district inspectors in co-operation with commercial clubs, county fair associations, and county agents, render much assistance in the gathering and installation of county exhibits at the State Fair. In 1917 in the third district, Luke Powell, the district inspector, represented Benton County. I. R. Fletcher of Vancouver, together with Chat Knight, local inspector for Clarke County, made an exhibit from that county. E. F. Perry of Chehalis, in the seventh district, made an exhibit of charts, plates, and diagrams describing the principal diseases of fruits, potatoes, and other vegetables at the Southwestern Washington Fair, the Western Washington Fair at Puyallup, and the county fairs at Elma, Grays Harbor County; Morton, Lewis County; Shelton, Mason County, and Port Angeles, in Clallam County. Henry Huff of the eighth district, located at Sumner, represented Pierce County. F. N. Rhodes and J. C. Eakle of Seattle made a display for King County.

In 1918 the above mentioned counties were represented. Mr. E. F. Perry assisted the Southwestern Washington Fair Association in making a very elaborate display. Mr. Huff assisted Mr. J. M. Hutchinson in making a display from Jefferson County. Other counties were represented at the fair, in which the inspectors rendered more or less assistance.

The chief of this division and the district inspectors each year are called upon to act as judges in the awarding of prizes in the agricultural and horticultural divisions at the county fairs in many parts of the state.

Encouragement of local fairs and participation in the State Fair is a part of the work of all employees of this division because the fairs are deemed of very great importance in the agricultural development of the state.

Respectfully submitted,

M. L. DEAN,
Chief, Division of Horticulture.

SEED LABORATORY REPORT.

**REPORT OF THE SEED LABORATORY FOR THE PERIOD JULY 1, 1916-
JUNE 30, 1918.**

NUMBER OF STATES WITH SEED LAWS.

Washington is one of twenty-six states having seed laws. The states are: Nebraska, Wyoming, Oregon, Iowa, in which the laws are administered by the dairy and food commission.

North Dakota, Montana, Idaho, New Jersey, Kentucky, Minnesota, under the jurisdiction of the state experimental station, but in most cases under a seed commissioner.

North Carolina, New York, New Hampshire, Ohio, Tennessee, Maine, Wisconsin, Pennsylvania, Michigan, South Carolina, Washington, Maryland, Louisiana, Vermont, Virginia, and West Virginia, the work is under the state department of agriculture, as also in several instances are the states which are administered through the dairy and food commissioner.

Six come under the experimental station and twenty, either directly or indirectly, under the department of agriculture.

THE LAW OF THIS STATE.

The principal provisions of the law are as follows:

1. The inspection of commercial seed exposed for sale in the various seed markets of the state.
2. The correct labeling of all seed sold or offered for sale in the state, provided same is sold in packages of one pound or more.
3. That seed offered for sale within the state must not contain the following weeds: Canada thistle, wild oats, dodder, corn cockle, wild mustard, charlock, or quack grass.
4. The establishment of a laboratory to test seed for the citizens of the state.
5. The enforcement of the law and penalties for the violation thereof.

THE LABORATORY.

The seed laboratory is well equipped and similar in every respect to those in use by the United States Department of Agriculture; we are prepared to give seeds both the purity and germination test, and further in every way possible, the improvement and safeguarding of Washington agriculture along agronomic lines.

SUBMITTING SAMPLES.

Tests are made gratis to all bona fide users, while commercial seed houses and growers are required to pay a fee of 50 cents for a purity and germination test. Samples of seed submitted for test must be representative of the lot from which they are taken. If taken from a sack with a sampler, some should be taken from the top, center, and bottom of the sack, and at least 5 per cent of the sacks constituting the lot be so sampled; from the amount

obtained a thoroughly mixed sample should be taken. The same holds good for samples taken from bins.

About a good sized handful should then be carefully sealed and mailed to the Department of Agriculture at Olympia, accompanied by a letter stating the test desired, also the name of the seed and the name and address of the sender. Tests are immediately made and results reported.

LABELING.

One of the most important provisions of the law is labeling, as it constitutes one of the strongest safeguards possible to protect the purchaser. Seed should be labeled "Standard" if sufficiently good to warrant such labeling; if not, it must be labeled with the actual percentage of purity and germination.

In the inspection work failure to comply with the law in this regard is more noticeable than any other departure from the regulations. The larger and more important seed houses scrupulously comply with this regulation, but the small dealer does not appear to thoroughly appreciate the importance of the requirement. The method of labeling is left very largely to suit the convenience of the individual, but it must comply with the law.

ADULTERATIONS.

The commercial seeds commonly adulterated are: Red clover, white clover, alfalfa, red top, bent and Kentucky bluegrass. In the case of alfalfa, burr clover, sweet clover, and trefoil are used. In adulterating red clover, alfalfa, sweet clover, and yellow trefoil are the favorites. Red top may have timothy mixed with it, while red top is very frequently mixed with, or substituted entirely for, the bent grasses. Kentucky bluegrass is frequently adulterated with Canada bluegrass, a much inferior grass.

SOURCE OF SAMPLES.

In the two years practically two-thirds of the samples were collected by inspectors; almost twice as many were sent in by dealers as by farmers, but in 1917-1918 the farmers increased their samples while the dealers decreased, with the result that there was only a slight difference between them. Neither, however, use the laboratory as they ought, but this is because so many people in the rural districts know nothing about the existence of laboratory, and these are the very people whom we wish to reach.

Table No. I, showing the number of samples submitted from different counties during the biennium, indicates how inadequate the inspection of seed stocks really is, and shows how impossible it is to do the work with the present resources. Thirteen counties producing farm crops to the value of \$43,000,000.00 annually were not once visited by an inspector, nor was one sample of seed sent to this department for test during the two years. Ten other counties with farm crops to the value of \$40,000,000.00 were hardly inspected at all; none of them furnished more than ten samples for test during the two years. It is urged that some provision be made to remedy this state of affairs.

Table II shows the importance of Washington as a seed producing state. In some cases practically all seed produced in the United States is grown in this state:

Table III is the result of a questionnaire sent out from this office to the various county agents of the state, and thanks are due to those gentlemen who courteously and in a spirit of co-operation gave us the information thus accumulated. Some of the most important seed producing counties, and those in which the industry shows great promise, failed to furnish any data. The La Conner flats in Skagit County is one of the two districts in the United States where it is possible to produce first class cabbage seeds. The writer also saw some very fine sugar beet and sludstrup mangold seed produced there, which in itself gives promise of a lucrative industry. Mr. Alexander of La Conner produced sludstrup seed at the rate of 3,700 pounds per acre, and of excellent quality.

In the eastern section of the state many farmers instead of letting the summer fallow lie idle, have been growing the legumes, beans, and peas. As that mode of farming gives promise of being extended, and in consideration of the feeding value of horse beans and peas, there seems some future for those crops in that district.

In the vicinity of Pullman and Ritzville the soil and conditions are conducive to the successful raising of high grade seed potatoes. Already in the southwest section of the state, in Clarke and Cowlitz counties, large acreages of potatoes are grown and shipped to California for seed purposes. Whatcom and Spokane counties produce large quantities of seed peas, Spokane County this year producing upward of 4,000 acres. As a result of great variety in soil, climate, and elevation, the seed possibilities in Washington are excellent, and the prospects of financial returns are alluring. For every bushel of seed raised in this state for home use or for shipment elsewhere, just so much do we arrest the importation of weak, unacclimated seed, and good, vigorous weed seed which will flourish because of the absence of natural enemies and drawbacks sustained in its former habitat. Therefore, by every means in our power, we should encourage and assist the production of home-grown seeds.

Table No. IV shows the comparison of the purity conditions as found in clovers and alfalfa in the last four years. Alfalfa has retained its purity in good shape, but during the last year red and white clover have depreciated considerably. The red clover situation this year is somewhat unusual, as, owing to the great scarcity in the west, a considerable proportion of our requirements must come from the middle western and eastern sections of the country, and we do not expect the quality will be as desirable as our local grown material. A perusal of the chart will show that in every case, with the exception of this year's red clover, a safe margin over the minimum requirement is observed.

Table No. V covers the same ground in relation to the grains and grasses as does No. IV to clovers and alfalfa.

PERCENTAGE OF WEEDS IN SAMPLES.

Table No. VI is worthy of very special consideration, as it shows to what an alarming degree some of the worst weeds in the state are increasing in the various samples tested in this laboratory. There are two ways of regarding this; either is alarming. Either the seedsmen are less careful of their offerings, or, owing to the increased home production, the farmers unknowingly are growing more and more weed seeds, each year worse than

the one previous. The situation in some cases is very bad and warrants drastic measures. Under our present law it is not compulsory to state on the sample where the seed was grown, hence we have no means of checking up the source from which the seed came. This section of the law should be amended in order to make that necessary.

The case of sheep sorrel in white clover is very noticeable. Curled dock and plaintain buckhorn are prominent in nearly every sample examined. Under the noxious weeds the most remarkable increase is that of dodder and wild mustard.

WEED CONTROL.

The above facts emphasize the necessity of the state acquiring control of the weed situation, with jurisdiction to act as occasion demands in precisely the same manner as the horticultural department would regulate an outbreak of fire blight, or cause a dirty and neglected orchard to be cleaned up. It is a grave injustice to the good, careful farmer to put him at the mercy of the shiftless, careless fellow who may happen to be growing a crop of weeds in his vicinity. Time, labor, and material are too precious, especially under present conditions, to permit of such a waste. Several states already have passed laws vesting the control of weeds in the State Department of Agriculture, prominent amongst them being Michigan, Wisconsin, Minnesota, and North Dakota. This transfer has removed a very important work from the realm of local politics and placed the regulatory work under impartial administration.

INSPECTION WORK.

The work of inspection has been accomplished under great difficulty. Owing to the fact that no appropriation has been made for the maintenance of this section, all expenses incurred have been borne by the fourth division; consequently, only a very small portion of the state has been visited. The principal towns and cities have, however, been visited, and in that way a check has been kept on wholesalers' stocks and occasional prosecutions made.

Definite lack of knowledge of the various seed houses and seed dealers doing business in the state has been a serious handicap, and it is to be hoped that at the legislature shortly to convene provision will be made for the licensing of every one selling seeds in the state, and that railroads will be required to refuse for shipment or delivery all seeds not properly labeled and stamped with the dealer's license. This will enable the department to keep a check on the quality of the material sold in the state by foreign concerns. On inspection trips nearly all seedsmen have this complaint; it is well founded and worthy of consideration. Foreign dealers will sell a chain of small towns a very inferior seed which has not been inspected by the department prior to distribution by the wholesaler, and which, when once in the hands of the small retailer, is almost immune because of the lack of funds to enforce the inspection law.

The State of Washington produces annually cereals and hay to the value of more than \$150,000,000.00, besides which many acres are ploughed under or fed green for fodder. Inspection of the seed for planting the enormous acreage necessary to produce this amount is urgently required if the best results are to be obtained. A glance at Table No. V or Table No. VII will show

how few samples of cereals are inspected or tested. It is essential that steps should be taken to remedy such conditions. Some cereal seed stocks recently inspected showed 2.62 per cent of wild oats present. The state law prohibits the sale of seed containing this noxious weed, yet it is the exception to find rye and oats which do not contain a very heavy trace of wild oats. The farmer who pays 6 cents per pound for wild oats gets a poor bargain.

Section 3062 (paragraph 5) is a weak section of the law and one which savors of class legislation. It is unfair to the seedsman and the good farmer. The fact that a man raised the seeds should be no excuse for him selling an inferior article and jeopardizing the fruit of another's labor.

EDUCATIONAL WORK.

One of the most pleasant phases of the work is the opportunity which exists to give farmers and seedsmen a little occasional advice, because, after all, this work must be to a large extent educational. It is impossible for one to see a person making a mistake without having a desire to help him. The farmer must be taught the value of good, clean, virile seed, also the necessity of having his seed tested for germination and purity before seeding. Washington grows more than 50,000 acres of corn annually, yet not five samples of corn are received at the laboratory each year for test, and every one knows the effect on the ultimate crop which a poor germination of seed will entail, for it may cut the crop in half.

The State of Montana annually tests some 10,000 samples, a large proportion of them sent in by the farmers. Minnesota tests approximately the same number, the majority being sent in by farmers. In two years the Washington farmers sent 118 samples to the laboratory at Olympia.

As a part of the educational work, the state seed analyst visits several of the fairs each year. The State Fair at Yakima was attended in September, 1917 and 1918, with an exhibit of seeds, grasses, weeds, etc. The Southwest Washington Fair at Chehalis in 1917 and the Western Washington Fair in Puyallup in 1917 and 1918 were also attended. It is the object of the department through the medium of these exhibits to impress upon the farmer the great necessity of sowing more useful seeds, and less useless weeds. (Weeds not only choke out the cultivated crop, but they absorb plant material and valuable moisture from the already too limited amounts available.)

It is also the aim of this section to give the seed work as wide publicity as possible through the newspapers, fairs, and similar methods. Lack of funds, however, greatly cripple the work. Some farmers in the state appreciate the importance of the seed work, but by far the majority of them have not yet been reached.

SEED IMPROVEMENT.

A bin of grain may be compared to a herd of cattle or a band of sheep. Superior individuals may be selected from each. Individual kernels of grain vary as much in ability to produce good or poor offspring as do individual animals. The heavy plump seeds are produced in the majority of cases upon the strongest and most vigorous plants, and the light shrunken seeds upon the weaker and less vigorous plants.

Improvement can only be brought about by eliminating the poorest and breeding from the strongest individuals. Hence there is just as much reason for selecting good individual seeds of grain as for selecting good individual animals. It will not cost more than 10 cents per bushel to clean and grade grain, and one bushel increase per acre will a good deal more than pay for it; if seed is properly cleaned and graded an increase of from five to ten bushels per acre may confidently be expected. The ultimate result of this work would undoubtedly be "certified seed," something both farmers and seedsmen are vitally interested in. Seedsmen claim they would willingly pay 25 per cent more for certified seed than for the ordinary run of stuff, and it certainly would be a splendid investment for the grower to obtain good, pure, acclimated seed by paying such a small premium. The seed growers of the state are endeavoring to organize themselves so that in a few years they may be producing certified seed on a commercial basis. The State of Idaho expects to appropriate \$5,000.00 to be used by the seed commissioner for seed certification work alone.

SAVING SEED.

It is frequently the case that some sections of a field produce grain of better quality than do other parts. This may be due to some difference in the soil—rust or some other cause. It frequently will pay to harvest such a section by itself and use it for seed. A still better plan is to have a special seed patch and improve on it each year if possible, finding the variety that is most suitable for local conditions, everything considered, and then eliminate the least desirable types of that variety. Grain to be used for seed should be fully matured and allowed to go through the usual sweat in the stack rather than in the bin, and when threshed, should be stored in a dry place where it will not heat. When possible, grain should have a rest after being matured before it is used for seed. Recently matured grain will not germinate so well as grain two or three months old; in some cases new grain will not germinate 20 per cent, while if held for three months, it would germinate 90 per cent.

Corn to be used for seed should be selected in the field before the crop is harvested and stored in a warm, dry place to cure properly. Severe cold is frequently injurious to damp seed, but freezing will not harm seed which is thoroughly dried.

ENEMIES OF WASHINGTON FARM CROPS.

Wheat is the leading crop in the State of Washington, and with present prices, is valued at around \$80,000,000.00 annually. Through smut it is estimated that 10 per cent of the crop is lost. Therefore, do not neglect to treat your seed before sowing, and use the most resistant strains suitable for your neighborhood. Marquis and Turkey Red, the former a red spring and the latter a red winter, have proven themselves most resistant in the Northwest, and both are excellent milling wheats, being used by practically all Northwest millers as the basis for their strong baker's flour. Full information regarding the treatment of seed cereals and potatoes, as well as information regarding the best varieties to be used, may be obtained from the county agents or the State College.

The Hessian Fly.

The dreaded Hessian fly made its appearance in the state this year. It was discovered in the flaxseed stage in a field of wheat near Kent. The discovery was made by the seed analyst of this department in conjunction with Mr. J. C. Eakle of the horticultural division. Steps were immediately taken, and the crop destroyed. Later in the summer the appearance of this same pest was reported at Fisher's Landing, near Vancouver, Clarke County, and Kelso, in Cowlitz County. At Vancouver the outbreak is so serious that the United States Bureau of Entomology recommends the discontinuance of wheat growing as the surest method of control.

The Hessian fly (*mayetiola destructor*) is much the most destructive of any of the insects attacking wheat, to which its injury is practically confined, for though it occasionally appears on barley and rye, it has never been reared on other grains or grasses. Its name was received from the fact that it first appeared on Long Island in 1779 shortly after some Hessian troops had landed there. It now appears in almost every wheat growing section of the world. Not infrequently it destroys from 25 to 50 per cent of the crop, while the average annual loss in the United States is 10 per cent of the crop.

Life History.

The adult flies are little, dark-colored gnats about one-tenth of an inch long; so minute are they that they generally escape observation. Each female lays from 100 to 150 small reddish eggs, placing them in irregular rows of from three to five or more, usually upon the upper surface of the leaves. In a few days these hatch into small reddish maggots which soon turn white, are cylindrical in shape, about twice as long as broad, and have no true head or legs. The fall brood of maggots conceal themselves between the leaf and its base. In the spring they stop at one of the lower joints and absorb the moisture and destroy the tissues. The first indications that the maggot is at work are the tendency of the plant to stool out, the absence of the central stem, and the much darker color of the foliage. Later many plants turn yellow and die.

About three or four weeks after hatching the maggots are full grown and of a greenish-white color. The skin becomes brown and shriveled, and inside is formed the pupa. This is commonly called the flaxseed stage; in this stage most of the fall brood passes the winter, the flies emerging in April or May, while the summer brood passes its flaxseed stage in the stubble during the late summer, emerging when the first wheat is planted in the fall.

Entomologists are of the opinion, however, that we only have one brood on the Pacific Coast, and our observations would tend to corroborate that opinion. The fly when found by us at the beginning of July was already in the flaxseed stage and was still in that condition in September, when the field was destroyed; this long wait was necessitated by the wheat field being surrounded by oats then in a ripening condition. The wheat was sown late in fall and grew well until early summer, when it gradually turned yellow and died, at no time becoming more than six inches in length. In order to destroy as many of the pupae as possible, the field was thoroughly rolled by a hot road roller, then burned and afterwards plowed under deeply. This work was accomplished under the supervision of Messrs. Rhodes and Eakel of the

Seattle horticultural inspection district, and thanks are due to both gentlemen for their assistance in the matter.

There are several species of small chalcids flies parasitic on the larvae and pupae, and were it not for their assistance, it would be a very difficult matter to raise wheat in several sections of the country. Rotation of crop and cultural methods are advised as means of control. Some strains of wheat are more resistant than others, the coarser-strawed—especially the red wheat—varieties generally being better able to withstand the attacks than the slow-growing, weak-strawed varieties.

The Wire Worm.

The wire worm frequently attacks wheat in all sections of the state; it is the larvae of the click bug and is very destructive to any crop which it may attack. It takes four years to reach maturity, three of which are spent in the soil. It may be controlled to some extent by rotation of crop, fall plowing, and destroying all the rubbish and old fence rows which are the haunts of the bug.

Rust.

Almost every year rust attacks wheat in the western section of the state. It may be recognized by the masses of red spores which are to be seen on the glumes and straw. In cold sections of the country the disease will not live over in this stage, but develops a resting stage on the barberry or incense cedar on which the cycle is completed, and the spores disseminated anew to infect another crop. In our mild climate on the Pacific Coast, however, the spores will live over in the uredospore stage and infect the plant direct thereby.

Seed treatment is of very little avail where this disease is concerned; cultural methods, crop rotation, and resistant strains are the main hope.

NOXIOUS WEEDS.

Wild Oats (*Avena fatua*, L.)

In many samples of cereals the seed of wild oats is found. It is an annual, and one of the worst weeds found in cereals, as it is very difficult to separate either by sieves or blowers. Wild oats closely resemble the cultivated varieties and possibly are the source from which our oats came. It may be distinguished by the strong black twisted awn, and the horseshoe scar at the base of the seed which is surrounded by hairs.

The seed may be sown with that of some crop, or carried by threshers, or distributed in manure which has not been well rotted. The crop matures early in July and sheds its seed which grows the following year, and may live in the soil for not to exceed twenty months.

Eradication.

Stop sowing seed grain containing wild oats. On infested land, grow early maturing crops such as fall rye for green manuring or forage. Where wild oats have matured and shattered out disc the land immediately after harvest to encourage germination. The plants thus started to grow may be destroyed by late fall plowing. A crop rotation containing a cultivated crop will greatly facilitate the eradication.

Clover and Alfalfa Dodder (*Cuscuta Epithymum*, Murr.)

This plant is an annual of an entirely parasitic nature. The dodder seeds germinate and soon perish unless they come in contact with a clover or alfalfa plant. Soon after contact is accomplished, the roots die. Thereafter the plant derives its nourishment from the host plant by means of haustoria, or suckers, inserted into the stem. The plant is practically leafless and spreads rapidly by means of long, twining stems which wind themselves around additional plants and soon form a dense matted surface over a considerable area. The flowers are whitish or pinkish, occurring in clusters along the stems. The plant flowers from June until frost and seed may be found from July on. The infected areas may be distinguished by the yellow coloration. The seed is small, greenish-yellow to dark brown in color, oval to spherical in shape, dull, lightly pitted, or granular.

When a clover or alfalfa patch is badly infected, the area should be cut or pulled up, allowed to dry, coal-oiled and burned. The area may be afterwards re-seeded if desired. If only in small spots, simply cutting and allowing to dry, then burning on the spot, will kill dodder if carefully done and before the dodder goes to seed.

Idaho alfalfa is very prone to contain dodder seed, and is always closely watched. In the eastern section of Washington some very fine alfalfa and clover seed may be produced, and many farmers are doing so. There is, however, a certain proportion of growers who are paying no attention to the dodder situation, and as a consequence, seedsmen have lost confidence in the offerings from the entire district. This is especially true of the clover seed produced in the Yakima Valley.

Canada Thistle (*Cirsium arvense*, L.)

Canada thistle is a perennial of European origin. The stems of the plant which are produced by deep running root stalks are smooth, much branched, and vary from one to three feet in height. This plant is dioecious, some plants producing only male flowers while others produce female. It is propagated by seed and root stalks. It yields seeds in July and August; the seeds are smooth, light brown, straight or slightly curved, and flattened. The only effective manner of eradication is to starve out the plant by continual clipping and preventing the manufacture of available plant food. This pest appears to be on the decrease in this state.

Wild Mustard (*Brassica arvensis*).

Wild mustard is well known and very common to grain growers throughout the state. It is an annual producing erect branching stems, which grow from one to three feet in height. It flowers from June to September, and seed is found in August. The seed is borne in pods from one to two inches long and is round, varying in color from reddish-brown to black. The seeds retain their vitality for many years, and a new outbreak will assuredly follow the plowing up of seeds sufficiently near to the surface to cause germination.

Eradication.

Avoid planting seed containing wild mustard. Sow to meadow for a few years where possible, or spray with iron sulphate. Planting in the fall is a very good practical method, and one that in the experience of the writer never

falls to lessen the amount of charlock in the crop on ground infested by this pest.

Seed Control.

Table No. VIII shows the amount of money spent for seed control work by some of the states, also the number of employees necessary to enforce the law and give adequate service to the public. The amount expended by the other ten states having seed legislation is not definitely known, inasmuch as the work is provided for from the general fund, but it is, however, in many states very considerable and in no case appears to be less than \$1,000.00 annually.

Suggestions.

The department wishes to submit the following suggestions as the basis for an amended seed law:

1. Seed exchange bureau, to be conducted by the department to locate good, clean seed, and put the men producing it in touch with seedsmen and other buyers; to publish such a list from time to time if necessary.
2. License all persons selling seed within the state. A nominal license fee and a bond to be furnished will tend to eliminate the irresponsible seed peddlers who are found in every section of the state and to protect the farmer and law-abiding seedsmen.
3. Railroads to refuse all seed not properly labeled and bearing the license number of the shipper.
4. Seed department to have complete jurisdiction over the weed control of the state; may deputize the road supervisors.
5. To make an appropriation to lead in the direction of seed certification and field inspection.
6. Free testing of samples for all citizens of the state, with a reasonable limit to be established which will protect the department from being used exclusively by the larger seedsmen.
7. Section 3057R, paragraph 3, to be amended, making it necessary to have the actual purity and germination test on the label, also date of test.
8. Section 3062R, paragraph 5, to be eliminated entirely.
9. Samples sent in for test to be labeled as follows:
 - (a) Name and address of sender.
 - (b) Name of seed.
 - (c) If grown by sender; if not, from whom purchased.

For much of the information in this report I am deeply grateful to my predecessor, Miss Katherine Stone, who was for four years head of this section, and who so ably laid the foundation on which we hope to build. Her well kept records and valuable accumulation of information were of inestimable value in rendering this report.

Respectfully submitted,

ALEX GALBRAITH,

State Seed Analyst.

TABLE I.

This table shows the number of samples received from each county and the best approximate value of hay and grain products of each county we have been able to secure.

COUNTIES	Place in List	Number of Samples in Two Years	Approximate Value of Farm Crops Exclusive of Wild Grass Hay
Adams.....	16	8	\$12,000,000
Asotin.....		0	3,000,000
Benton.....	13	22	2,500,000
Chelan.....	14	16	1,000,000
Challam.....	20	4	2,000,000
Clarke.....	9	44	1,500,000
Columbia.....	25	1	4,500,000
Cowlitz.....	18	5	500,000
Douglas.....		0	5,000,000
Ferry.....		0	2,500,000
Franklin.....	22	4	3,000,000
Garfield.....	26	1	6,000,000
Grant.....	19	5	5,500,000
Grays Harbor.....	17	6	1,500,000
Island.....	21	4	.....
Jefferson.....		0	.....
King.....	2	139	5,250,000
Kitsap.....		0	.....
Kittitas.....	15	13	3,500,000
Klickitat.....	24	2	3,500,000
Lewis.....	12	35	1,500,000
Lincoln.....		0	10,500,000
Mason.....		0	500,000
Okanogan.....		0	500,000
Pacific.....		0	150,000
Pend Oreille.....		0	450,000
Pierce.....	5	63	.....
San Juan.....		0	.....
Sagit.....	11	36	4,750,000
Skamania.....		0	.....
Snohomish.....	8	52	.....
Spokane.....	3	123	.....
Stevens.....		0	1,750,000
Thurston.....	7	55	1,250,000
Wahkiakum.....	23	3	.....
Walla Walla.....	6	62	11,500,000
Whatcom.....	4	75	3,750,000
Whitman.....	10	42	20,750,000
Yakima.....	1	141	15,250,000
Total.....		902	\$153,350,000

TABLE II—PRODUCTION OF VEGETABLE SEED IN STATE OF WASHINGTON.

PLANT	Acres	Amount Per Acre (Pounds)	Percentage of Total National Production
Onion.....	30	300	.....
Dwarf beans.....	456	300	.....
Garden beans.....	26	350	.....
Garden peas.....	38,467	900	33.3
Turnips, white.....	353	1,200	50
Turnips, Swede.....	227	1,200	80
Mangold, Wurtzel.....	101	1,350	25
Beet (garden).....	121	1,135	5
Pumpkin.....	148	250	10
Summer squash.....	323	325	33.3
Spinach.....	1,767	1,000	50
Cabbage.....	514	650	75
Radish.....	709	750	10

TABLE III.

COUNTIES	Alfalfa	A'sike	Barley	Beans	Cabbages	Clover (C.)	Clover (R.)	O'over (W.)	Corn	Kale	Man- golds	Oats	Peas	Red Top	Rye	Sweet Clover	Tim- othy	Tur- nips	Vetch
Clark's.....									100	10		1,000	80		40				60
Cowiltz.....			50						50			500	5						
Franklin.....																			
Grays Harbor.....																			
Jefferson.....																			
Kitsap.....										2								25	
Klickitat.....	50		1,500	50								1,500	60		1,000	40			
Pierce.....				25						20		985	150		100				
Pacific.....												Very little							
Pend Oreille.....		10				20						850	35		100				
Spokane**.....													40,000						2,000
Thurston.....			300	50					10			6,000	300		1,000			10	25
Total acres reported	50	10	1,850	125	*	20			130	32		9,615	40,550		2,240	40		35	2,035

† Is a wheat county, but in the near future will have about 10,000 acres under irrigated cultivation, and then may produce some seed.

‡ Farmers not interested in this work, but agent suggests mangolds, rutabaga and spinach to be worked in conjunction with dairying.

§ Usually surplus of bluebell and kaiser field peas, but this year crop very short in everything.

** Also possibility for many other varieties of seed which might be pushed.

* Seventy-five per cent of all cabbage seed produced in United States produced in Washington, principally in Skagit county.

TABLE IV—AVERAGE OF PURITY CLOVER AND ALFALFA.

NAME OF CROP	Stand- ard	1914-1915			1915-1916			1916-1917			1917-1918		
		Number of Samples	Per- centage of Purity	Number Above Standard	Number of Samples	Per- centage of Purity	Number Above Standard	Number of Samples	Per- centage of Purity	Number Above Standard	Number of Samples	Per- centage of Purity	Number Above Standard
Alfalfa	96	53	98.93	50	24	98.98	21	29	98.25	27	12	97.78	11
Red clover.....	92	75	97.96	75	21	96.5	10	20	98.02	20	29	90.9	21
White clover.....	90	19	95.75	18	8	94.39	6	7	92.64	6	11	90.43	10
Sweet clover.....	90	25	96.57	25	8	97.46	6	10	93.51	8	8	94.94	7
Totals.....		171		108	61		52	66		61	62		51

TABLE V—AVERAGE PERCENTAGE OF PURITY OF GRAINS, GRASSES AND ROOT CROPS.

NAME OF CROPS	U. S. Seed Stand- ard	1914-1915			1915-1916			1916-1917			1917-1918		
		Number of Samples	Per- centage of Purity	Number Above Standard	Number of Samples	Per- centage of Purity	Number Above Standard	Number of Samples	Per- centage of Purity	Number Above Standard	Number of Samples	Per- centage of Purity	Number Above Standard
Timothy	96	13	97.94	12	18	96.16	16	12	99.09	12	10	97.2	9
Cereals	93	2	97.63	1				2	90.96	0	1	96.66	1
Bluegrass	80	5	89.56	3	2	91.90	2	6	94.37	6	2	93.08	2
Red top	90	2	94.93	2				4	87.49	3			
Rye grass	95	2	94.93	1	1	98.65	1	5	94.47	4	1	97.27	1
Vetch	98	2	98.93	0	1	98.98	1				1	82.77	0
Orchard grass	70	4	93.38	4	2	92.20	2	4	95.01	4	8	96.96	8
Kals	99				2	92.99	0						
Best											1	98.75	1
Total.....		30			26			83			24		
Miscellaneous		8		8	8		8	13		12			
Totals.....		38		31	24		30	45		41	24		23

TABLE VI—GERMINATION TESTS, 1914-1916.

KIND OF SEED	No. of Tests	Standard (U. S.)	Highest Test	Lowest Test	Average Test
Alfalfa (<i>Medicago sativa</i>).....	73	80	97.5	54	87.6
Barley (<i>Hordcum vulgare</i>).....	6	90	100.0	91.5	96.5
Bluegrass (<i>Poa pratensis</i>).....	15	45	83.5	22.0	50.0
Clover, red (<i>Trifolium pratense</i>).....	89	80	97	80.0	84.1
Clover, alsike (<i>Trifolium hybridum</i>).....	34	75	96	77	86.22
Clover, white (<i>Trifolium repens</i>).....	32	75	94	58	81.48
Clover, sweet (<i>Mellilotus alba</i>).....	4	75	76.5	60.5	70.0
Corn, sweet.....	2	75	100.0	76.5	88.25
Millet (<i>Setaria italica</i>).....	2	85	93.5	91.5	92.5
Oats (<i>Avena Sativa</i>).....	4	90	100	64	83.0
Orchard grass (<i>Dactylis glomerata</i>).....	5	70	80.5	64	72.5
Kale	4	90	96.5	30	74.1
Rye grass (<i>Lolium Italicum</i>).....	2	80	93	92	92.5
Timothy (<i>Phleum pratense</i>).....	37	85	99	58	90.2
Wheat (<i>Triticum</i>).....	2	90	99.5	99.5	99.5
Red top (<i>Agrostis alba</i>).....	2	70	87.5	11.5	49.5
	313				

TABLE VII—GERMINATION TESTS, 1916-1918.

KIND OF SEED	No. of Tests	Standard (U. S.)	Highest Test	Lowest Test	Average Test
Alfalfa (<i>Medicago sativa</i>).....	47	80	98.5	57.5	84.32
Barley (<i>Hordcum vulgare</i>).....	1	90	80.5	80.5	80.5
Bluegrass (<i>Poa pratensis</i>).....	8	45	80	35.5	65.12
Clover, red (<i>Trifolium pratense</i>).....	37	80	95.0	64.5	82.53
Clover, alsike (<i>Trifolium hybridum</i>).....	12	75	98.5	72.5	82.09
Clover, white (<i>Trifolium repens</i>).....	11	75	82.5	33.5	73.5
Clover, sweet (<i>Mellilotus alba</i>).....	3	75	78	42.5	64.8
Corn, sweet.....	6	96	97	82.0	89.25
Millet (<i>Setaria italica</i>).....	1	85	89.5	89.5	89.5
Oats (<i>Avena Sativa</i>).....	3	90	98.5	58	83.5
Orchard grass (<i>Dactylis glomerata</i>).....	10	70	86.5	67.5	77.85
Red top (<i>Agrostis alba</i>).....	3	70	71.5	52.0	65.0
Meadow fescus (<i>Festuca pratensis</i>).....	1	85	81.5	81.5	81.5
Kale	10	90	99.0	64.5	93.1
Rys grass (<i>Lolium Italicum</i>).....	5	80	82.5	68.5	73.2
Timothy (<i>Phleum pratense</i>).....	21	85	98	84	92.5
Wheat (<i>Triticum</i>).....	16	90	99.5	73.0	94.34
	195				

TABLE VIII.

[illegible]

TABLE IX—SEED CONTROL—STATES WITH DEFINITE APPROPRIATIONS.

STATE	Annual Appropriation	NO. OF PERSONS EMPLOYED
Idaho	\$5,000	(Inadequate; expects \$7,500). Seed commissioner, analyst and assistant; also inspectors in country as funds will allow.
Kentucky	3,500	Chief, and as much assistants as funds will allow.
Maine	23,000	Chief, inspector, analyst, and necessary help. Also assist in other inspection work.
Montana	16,000	Superintendent, assistant, three other assistants, and as much additional help as possible.
Nebraska	1,800	(Salary of analyst). As much help as necessary because work is bound up in the department as a whole.
New Hampshire...	500	
New Jersey.....	7,000	Chief, analyst, assistant, stenographer and laboratory aid. (Expect more; not enough). Seed commissioner, two regular and several part-time assistants.
North Dakota....	6,500	Has federal analyst.
Oregon	1,000	Pays salary of analyst.
Pennsylvania	1,500	(Expects more). Chief analyst, three laboratory assistants.
Virginia	6,500	Analyst.
Washington	1,200	(Entirely inadequate). Chief, assistant, stenographer and laboratory aid.
Wisconsin	5,000	One analyst.
Wyoming	1,200	One analyst and necessary assistants.
Minnesota	6,500	One chief analyst, assistant, two inspectors.
West Virginia....	10,000	

North Carolina and Tennessee also have sufficient funds to carry on the work, but such funds are not segregated and are also helped by licenses. The other ten states receive small funds from the funds of either the dairy and food commission or department of agriculture.

REPORT ON FOODS, FEEDS, FERTILIZERS, DRUGS, OILS, BAKERY AND RESTAURANT INSPECTIONS.

Hon. E. F. Benson,
Commissioner of Agriculture,
Olympia, Washington.

Dear Sir: In compliance with the law, I am submitting herewith the Third Biennial Report of the Fourth Division of the State Department of Agriculture, covering the period from July 1, 1916, to June 30, 1918. The work includes foods, feeds, fertilizers, drugs, oils, bakery and restaurant inspections.

The Hon. J. J. Higgins of Seattle was chief of this division from July 2, 1913, to August 3, 1917, when, after a serious illness, he departed this life. After his demise I was appointed to succeed him as chief of the division, since which time I have endeavored to administer the affairs of the division in an economical and efficient manner and in accordance with the policy of the state administration, viz., to accomplish as much work as possible with the least expense.

The activities of this division during the past biennium have been greatly increased over those of the previous period. This is due, in a great measure, to our country being at war. The Federal Government, in its desire to conserve and save for our boys and allies, has permitted (with restrictions) substitutes and by-products to be used in the manufacture of foods. Some of the manufacturers have taken advantage of this leniency and utilized mill offal, refuse and rubbish for the same purpose. Until the past year the adulteration, misbranding and fraud in the manufacture and sale of food products has been on the increase, which has multiplied our work and made us more active, watchful and vigilant.

Seattle being the largest manufacturing and distributing point of food products in the state and the state office having been permanently located here since January, 1917, has given the whole force of the fourth division opportunity to be alert and on the lookout for the large shipments of illegal and unfit food products that are distributed from here. We get them in bulk before they are sent broadcast throughout the state, thereby saving traveling, hotel and other expenses while hunting them up.

During the period covered in this report there were employed in food, feed, fertilizer, bakery and restaurant inspection work two inspectors all of the time and three part of the time, in addition to myself, and one drug inspector all of the time. The duties of the food inspectors and the drug inspector called them practically to all the large cities and towns of the state and, through the use of our Ford machine, inspections were made at many of the smaller towns and out-of-the-way places; work that could not have been accomplished, except at heavy expense, without the Ford auto.

They covered the inspection of foods and drugs at the manufacturing plants, factories, wholesale and retail food and drug establishments, as well as bakeries, restaurants, hotels, boarding houses and doctors' offices. Inspections have been made of cold storage and packing plants, slaughter and commission houses, grocery stores and meat markets, feed and flouring mills and stores, bottling works and soda fountains, drug stores, butter stores, bakeries.

restaurants and all places where food and drug products are manufactured, stored or offered for sale.

The total number of inspections made by the fourth division during the biennium was 25,788, subdivided as follows: Cold storage plants, 64; packing plants, 11; manufacturing plants, 102; wholesale houses, 219; commission houses, 163; grocery stores, 5,119; meat markets, 3,516; bottling works, 53; soft drink places, 1,564; drug stores, 2,107; butter stores, 1,728; bakeries, 1,008; restaurants, 775; barber shops, 4; confectioneries, 99; creameries, 3; doctors' offices, 44; fruit and vegetable stands, 2,486; fish markets, 480; fertilizer plants, 10; feed mills, 216; feed stores, 439; general stores, 144; hotels and boarding houses, 25; hospitals and sanitariums, 50; oils, 273; public market stalls, 3,743; piers, 203; fruit stands, 493; seed stores, 32; slaughter houses, 69; miscellaneous, 304; reinspections, 186, and assistant inspections, 33.

The foregoing inspections resulted in 65,798 packages of foods and drugs, 88,432 pounds of bulk goods, 2,730 dozen of eggs and 100 miscellaneous items—consisting of 10 gallons of cream, 1 barrel bulk olives, and 89 old and insanitary cooking and baking utensils—being condemned, because of being unfit for human food, and the utensils unfit for use in preparing foods for consumption. When possible the above condemned goods were used for animal food; when not, they were utilized in the manufacture of fertilizers. The utensils were destroyed.

In comparing the inspections and destructions of this with the previous biennium you will note that during this period there were 9,184 more inspections made, 24,303 less packages, 197,825 less pounds of bulk goods, and 12,623 less dozen of eggs destroyed; which is evidence of greater activity on the part of the division and that the inspection force has at all times been on the job.

Reports of these different inspections are on file in the Seattle office.

There were also gathered and submitted for analysis to the state chemist 819 samples of foods and drugs, 124 samples of stock and poultry feeds suspected of being in violation of the pure food and drug law, and 142 samples of fertilizers for analysis. General food and drug samples have not been taken for several years past, owing to the lack of appropriation for the purpose. They should be taken at least once annually, that the department might know they are being held to the standard; besides, it would have a tendency to make the manufacturer more careful.

In addition to our regular inspection work we have conducted an educational exhibit and campaign covering a period of four weeks at four fairs.

CHANGES IN FORCE.

As state food inspector the first fourteen months and as chief of the fourth division the last ten months of this biennium, I have made 6,290 inspections, including 11 slaughter houses, which resulted in closing 1 slaughter house permanently, 3 temporarily closed, 3 notified to improve conditions, and 4 passed inspection; besides making 21 prosecutions for violations of the food laws, resulting in 21 convictions.

The present state food inspector, who succeeded me as such on September 1, 1917, in the last ten months of the biennium has made 3,568 inspections, including 40 slaughter houses, resulting in 10 being temporarily closed,

6 permanently closed, 12 notified to improve conditions, and 12 passed inspection; besides making 43 prosecutions for violation of the state food law, resulting in 1 dismissal and 42 convictions.

From the beginning of this biennium to November 1, 1917, when he severed his connection with the department, the assistant oil and food inspector at Spokane had made 1,113 oil and general food inspections, including 18 slaughter houses, resulting in 2 being permanently closed, 4 temporarily closed, 5 notified to improve conditions, and 7 passed inspection.

BAKERIES.

During this period there were 1,008 bakeries and 775 restaurants carefully inspected. These inspections covered conditions and quality of material used, cleanliness and health of employees, sanitary conditions of buildings, utensils, walls, floors, sinks, etc.

The state bakery and restaurant inspector has worked in conjunction with the food, drug, stock-feed inspectors and myself, and made, including general food, a total of 9,255 inspections of butter stores, meat and public markets, stalls and stands; besides during the biennium has made 50 prosecutions of violators of the pure food laws, resulting in 2 acquittals, 1 dismissal, and 47 convictions.

EGGS.

This state has a law classifying and regulating the labeling and marketing of eggs, which helps somewhat, but we still have complaints about bad eggs. Several years ago the Federal Government claimed that 17 per cent of the egg production of the United States found its way to the dump. I understand, however, this percentage has been decreased somewhat. With careful handling and shipping I believe it can be reduced to a minimum.

A produce merchant of this city told me a few days since that he received a case of eggs from a shipper and found the whole top layer putrid. He notified the shipper, and the eggs were held subject to his order. Subsequently they were turned over to another produce house, where I found them. I had this case of eggs candled, after which two-thirds of the case were sent to the dump; the remainder were only fair cooking eggs, and were sold for that purpose. It is doubtful that the shipper received shipping charges, etc., out of the deal.

To save the egg producer this loss, to save trouble for the produce merchant, and to assure the consumer good eggs, I would suggest the egg law be amended so as to compel those handling eggs to candle them before transferring them to the next merchant, beginning with the producer, as candling is the most accurate way of detecting a faulty egg.

VINEGAR.

During this period we have had very little trouble with the enforcement of the regulations relating to vinegar, as chapter 168, Session Laws 1917; known as substitute Senate Bill 90, compels the Commissioner of Agriculture of this state, with the approval of the Agricultural Advisory Board, to adopt, publish, and enforce as the standards of this state the standards of quality, purity and strength adopted and applied by the United States Department of Agriculture in enforcement of the laws of the United States against the

adulteration and misbranding of foods and drugs, except in cases where other standards are specifically prescribed by the laws of this state.

Prior to the enactment of the above law the state regulation relating to vinegar was in conflict with the federal ruling on the same matter, because the state regulations for cider vinegar called for $4\frac{1}{2}$ grams acetic acid strength, while the federal ruling for cider vinegar called for 4 grams acetic acid. The difference of a half gram between the federal and state rulings caused quite a little dissatisfaction among the vinegar manufacturers of the state, when they knew they were permitted to ship vinegar interstate containing only 4 grams and for intrastate purposes they were compelled to make the product a half gram stronger. Now that the state and the federal rulings are the same there seems to be no dissatisfaction or complaint and the vinegar matter is running smoothly.

VEAL.

For several years past, since the milk condensers have been paying the higher prices to the dairy farmer for whole milk, the farmer has claimed he could only feed a calf at a loss. To prevent this loss he has therefore sold the veal calves to the so-called calf buyer, who, with his auto truck goes from one dairy farm to the other, gathering up these two and three days old calves, and, I understand, sometimes contracts for them before they are dropped at a very small price. They are taken to rural slaughter houses, barns, and sometimes in the timber, slaughtered and placed on the market for veal. This product was seized, condemned and destroyed when falling into the hands of our inspectors, but no arrests were made until chapter 168, Sessions Laws 1917, known as substitute Senate Bill 90 was passed, making it obligatory on the State Commissioner of Agriculture to adopt, publish and enforce section 21, paragraph 1 of the regulation governing meat inspection of the United States Department of Agriculture, which reads: "Carcasses of calves, pigs, kids, and lambs too immature to produce wholesome meat shall be condemned. Such carcasses shall be considered too immature to produce wholesome meat if (a) the meat has the appearance of being water-soaked, is loose, flabby, tears easily, and can be perforated with the fingers, or (b) its color is grayish red, or (c) good muscular development as a whole is lacking, especially noticeable on the upper shank of the leg," etc.

After warning the people trafficking in this unwholesome product for several years, last spring, under the above regulations, we rounded them up and since February, 1918, to the present date we have made 25 prosecutions for violation of this regulation, resulting in 1 dismissal and 24 convictions. We are now getting more wholesome veal.

SLAUGHTER HOUSES.

During the biennium there were 69 rural slaughter houses inspected, with the following results: Temporarily closed, 17; permanently closed, 9; notified to improve conditions, 20; passed inspection, 23; 17 were temporarily closed because the insanitary conditions surrounding the slaughtering made the meat product a menace to public health and they were closed until these conditions were remedied; 9 were permanently closed because the location was absolutely unfit for the purpose; 20 were given notices to improve condi-

tions, such as batten and screen houses to exclude flies, fix drainage, clean killing bed and walls surrounding same; also to whitewash interior of house; 23 passed inspection.

Many of the rural slaughter houses have been fearfully insanitary, but through the passage of substitute Senate Bill 90 by the 1917 session of the legislature, compelling this department to adopt, publish, and enforce the rules and regulations as adopted and applied by the United States Department of Agriculture, we have been able to remedy many of the existing filthy conditions. While it is almost an impossibility to make the rural slaughter house operators comply to the letter of the United States rules and regulations, we are getting to it as nearly as possible, and the country slaughter houses are in a more sanitary condition than ever before.

COLD STORAGE.

There is urgent need of regulation of cold storage. During the biennium large quantities of food products have gone from the cold storage to the fertilizer plants because of there being no time limit for cold storage products. During August of this year we sent from a cold storage plant in Seattle approximately 5,000 pounds of fish which should have been used as a food product instead of being held until it became rusty, putrid, and only fit for fertilizing purposes. This is only one of many instances that occur during a biennium.

We have now in course of preparation a bill covering the matter of cold storage and earnestly hope for its consideration and adoption that this waste of food products may be remedied.

SANITATION.

Notwithstanding the lack of a general sanitary law has placed the inspection force of this division at a great disadvantage, through judgment and diplomacy we have accomplished a great deal of good work along sanitation lines, such as having toilets removed from rooms where food products are manufactured and stored and the cleaning up of back rooms connected with grocery stores and meat markets, where stale vegetables are frequently left to decay and the sawdust from the meat market floor is left for days until the scraps of meat mixed with it become sour and sometimes putrid. But should the inspector be called at any time he would be found with nothing to back him.

I therefore suggest the enactment of a sanitary law similar to that of the State of Iowa, the enforcement of which can be conducted by the inspectors without an increase of expense.

STOCK FEEDS.

This law having been placed under this division for enactment, I, as state food inspector, had gathered all stock and poultry feed samples and submitted them to the state chemist for analysis, until June 20, 1917, when there was an inspector appointed for this purpose; since which time, until the end of this period, there were 124 stock and poultry feed samples taken and submitted to the state chemist for analysis, resulting in 85 being legal, 27 illegal, and 12 doubtful.

Under section 6023 of the State Stock Feed Law there were 11 complaints filed for violation of the law in King, Whatcom, and Spokane counties, resulting in 3 convictions, 1 dismissal, 2 suspended judgments, and 5 cases pending.

The stock feed inspector beside the above work has made 1,179 inspections, including bakery and general foods, and has attended 9 county fairs for educational purposes on stock and poultry feeds.

FERTILIZERS.

During the biennium there were gathered and submitted to the state chemist for analysis 142 samples of fertilizers, the fees collected for the same amounting to \$1,122.00.

The law authorizes the publication of the results of the analysis made. The 1917 session of the legislature failing to provide the necessary printing fund is why such publications have not been made.

The fertilizer law should be so amended as to provide a standard, or the necessary funds should be appropriated for the purpose of publishing the results of these analyses, because, prior to the war, when potash was plenty and low in price, some of the manufacturers used the word "complete" on some of their brands, and gave as their guaranteed analysis—Nitrogen, Phosphoric Acid and Potash. The past season potash was virtually off the market, and it was impossible to procure it, and still some of the manufacturers persisted in branding a fertilizer "complete" when it contained only nitrogen and phosphoric acid. If it was complete with potash it is incomplete without it, and the results of the analysis should be published as per the law, that the farmers may be advised of this and other facts.

DRUGS.

The drug inspector during this period has made 4,365 inspections, consisting of wholesale and retail drug establishments, hospitals, sanitariums, doctors' offices, bottling works and soda fountains and general food establishments. His personal report will be found with the division reports.

OIL.

The report of the chief oil inspector will be found in connection with the division reports, with his comments.

PROSECUTIONS.

One hundred and nineteen prosecutions for violation of the food and drug laws were made by this division during the biennium, which resulted in 107 convictions, 5 dismissals, 2 forfeitures of bonds, 2 suspended judgments, 2 acquittals, and 1 ordered to discontinue basement bakery, but was not fined. Besides the above, 7 cases are now pending. The fines and forfeitures aggregate \$3,770.00. The above prosecutions were made in 21 counties.

INSPECTORS.

I attribute much of the success of this division to the fact that we have not been hampered by being compelled to take into the service men who are not qualified for their positions by training.

The scientific nature and commercial importance of the several lines of work pursued by us make it necessary that none but those trained in their

respective lines be employed, as in any other business enterprise we could not expect men schooled in another line of work to make good. To be of service to the public the inspectors enforcing the food, feed, fertilizer, drugs, bakery, and restaurant laws must be familiar with commercial channels through which foodstuffs are marketed; must be conversant on the subject of proper methods of handling and storing foods; and must possess sufficient training in sanitary science to secure a practical application of the several laws.

As a matter of fact, it is difficult for the department to secure and retain the services of men who are competent to do the work in the various fields pursued by us. The experience gained by our inspectors qualifies them in a few years for positions at an advance in salary and the state is compelled to compete with the Federal Government, other states and cities and commercial concerns for their services.

Our salary limits have remained substantially the same as those in force eight years ago, regardless of the fact that the cost of all of the necessities of life have risen at least 100 per cent. Our people are all trained and giving efficient service. Unless the salary limits affecting the inspectors, stenographers and clerks of this division are substantially increased I feel that we will be unable to maintain the present efficient service.

DIVISION BULLETIN.

During the biennium we have issued no bulletins as required by the food and fertilizer law because of the lack of sufficient printing fund.

The detailed inspection reports are on file in the department and can be consulted by the public at any time.

Respectfully submitted,

WILL H. ADAMS,

Asst. Commissioner, in Charge Division Foods, Feeds, Etc.

REPORT OF STATE DRUG INSPECTOR.

In making a report of work done and results accomplished during the past biennium I find that many conditions of affairs have arisen which have delayed trips and in many cases made complete change of routing necessary.

Due to the present unsettled conditions, manufacturers have been compelled to change formulae, and many to discontinue the manufacture of one, and sometimes many or all, of their preparations, as the materials entering into the composition of such preparations were either produced, manufactured or grown in one of the warring countries.

This has made our work harder, and necessitated greater vigilance; as some manufacturers, not being equipped to test ingredients, would buy from those whose price was the lowest, without regard to the quality of the drug itself, resulting in a mixture the composition of which was unknown, or the results to be obtained from the uses of it greatly misstated.

On the other hand, those manufacturers who always had standardized doubled their vigilance, and the dealers who handled their preparations were able to continue the quality of their own products, though at an increased price.

Many unscrupulous persons have taken advantage of the shortage of chemicals to foist upon the trade imitations of these at prices enough below the quoted price of the true article to act as a bait to the unsuspecting purchaser. By obtaining the co-operation of the dealers, who before buying would request that these products comply with the laws and regulations, we have been able to detect and regulate such dishonest practices.

The shortage of sugar has caused considerable trouble, but the loyalty of manufacturers has come to the front with an earnest endeavor to produce substitutes requiring lesser amounts or new ones made from pure ingredients heretofore unthought of for such uses.

There had been many complaints of foreign (poisonous or harmful) ingredients having been added to candy and other foods sold at places frequented by soldiers, but most of these upon investigation (samples having been taken and submitted to the state chemist for analysis) have proved to be without foundation. But we could not relax our vigilance, and thus considerable time and money was spent to carry on these investigations which, in other less serious times would be spent in looking after quality, cleanliness and proper labeling throughout the state.

As the greater quantity of goods for our state are unloaded at coast points, and the greater congestions of people doing war work have been on Puget Sound, it has required more of our time at Seattle, Tacoma, and other coast points. But we have covered all the state at least once each year and answered each call made upon us as soon as we could complete what we had in hand and hurry to that point.

We have been hampered very greatly in the purchase of samples by the shortage of money and through the lack of help given the two state chemists, who do our work without pay, and as soon as they get an assistant broken in see him taken away by some other school which is more liberal with salaries.

We have compelled the bottlers of soft drinks to adopt standards and label their products correctly, and today they are producing most of their goods from the fruit or fruit juices themselves, instead of synthetic ethers as formerly. We have compelled greater cleanliness around soda fountains and require glasses and utensils to be washed in hot water, and when such hot water is not available, have urged the use of sanitary paper cups, etc.

We are also greatly hampered by lack of transportation facilities, and believe it to be to the best interest of the state that each inspector be supplied with an automobile, that each may finish his work in one place and hurry on to the next without waiting upon some other inspector whose work may take twice as long to do properly, or cause that person to do only a portion of his work in order to not hold up others traveling with him in the same automobile.

Respectfully submitted,

EDWARD L. JONES,
State Drug Inspector.

SUMMARY OF INSPECTIONS MADE BY THE STATE DEPARTMENT OF AGRICULTURE, DIVISION OF FOODS, FEEDS, ETC.

INSPECTIONS MADE	INSPECTORS							Totals
	Adams.....	Coffm.....	Collier.....	Powler.....	Gray.....	Henderson.....	Jones.....	
Assistant inspections.....	2	.....	3	4	.....	.....	24	33
Bakeries (including notices).....	8	733	6	.....	106	139	16	1,008
Barber shops.....	.....	.....	.....	.....	.....	.....	4	4
Bottling works.....	.....	.....	.....	.....	.....	.....	53	53
Butter stores.....	403	837	8	.....	33	447	.....	1,728
Confectioneries.....	11	32	.....	.....	43	.....	13	99
Cold storage.....	34	1	12	.....	2	18	2	64
Commission houses.....	.....	.....	.....	.....	.....	163	.....	163
Creameries.....	.....	.....	.....	.....	.....	3	.....	3
Doctors' offices.....	.....	.....	.....	.....	.....	.....	44	44
Drug stores.....	.....	.....	.....	.....	.....	.....	2,107	2,107
Fruit and vegetable stalls.....	826	1,172	9	.....	22	457	.....	2,486
Fish markets.....	273	64	70	.....	20	52	1	480
Fertilizer plants.....	2	.....	7	.....	.....	1	.....	10
Feed mills.....	.....	.....	216	.....	.....	.....	.....	216
Feed stores.....	3	.....	424	.....	.....	.....	12	439
General stores.....	.....	.....	5	.....	.....	.....	139	144
Groceries.....	2,653	949	144	1	306	1,026	40	5,119
Hotels and boarding houses.....	1	23	.....	.....	.....	.....	1	25
Hospitals and sanitariums.....	.....	4	.....	.....	.....	.....	46	50
Meat markets.....	1,634	514	132	.....	279	950	7	3,516
Manufacturing plants.....	27	8	49	.....	.....	13	5	102
Miscellaneous.....	127	6	10	.....	81	21	60	304
Oil.....	.....	.....	.....	32	84	.....	157	273
Packing plants.....	.....	.....	10	.....	.....	.....	1	11
Public market stalls.....	.....	3,688	19	.....	4	.....	32	3,743
Piers.....	125	.....	8	.....	.....	70	.....	208
Reinspections.....	.....	186	.....	.....	.....	.....	.....	186
Restaurants.....	68	647	.....	.....	34	16	10	775
Stands.....	20	372	.....	.....	.....	101	.....	493
Seed stores.....	.....	.....	32	.....	.....	.....	.....	32
Soft drink stands.....	.....	0	.....	.....	.....	.....	1,564	1,564
Storage plants and warehouse.....	.....	.....	.....	.....	.....	6	3	9
Wholesale drug stores.....	.....	.....	.....	.....	.....	.....	13	13
Wholesale houses.....	62	.....	15	.....	81	50	11	219
Slaughter houses.....	11	.....	.....	.....	18	40	.....	69
	6,290	9,235	1,179	37	1,113	3,568	4,385	25,787

BAKERY INSPECTION.

Bakeries inspected—		
Graded as good.....	302	
Graded as fair.....	130	
Graded as poor.....	38	
Not baking.....	6	
	476	476
Reinspections.....	186	
Total inspections.....	662	
Notices served.....	177	
U. S. reports.....	80	
Bakeries having certificates.....	279	
Bakeries without certificates, as shops do not meet requirements.....	191	
Bakeries not baking.....	6	476
Number of towns visited on inspection trips.....	75	

Towns visited and number inspections made—

Aberdeen	13
Auburn	3
Bellingham	8
Black Diamond	2
Blaine	1
Bremerton	8
Buckley	5
Burlington	1
Burton	1
Camas	1
Carbonado	1
Carson	1
Cashmere	1
Centralia	3
Chehalis	2
Clear Lake	1
Cle Elum	3
Colfax	2
Davenport	1
Edmonds	1
Ellensburg	4
Elma	2
Enumclaw	2
Ephrata	1
Everett	13
Everson	1
Fairfax	2
Ferndale	1
Garfield	1
Georgetown	3
Goldendale	1
Harrington	1
Hillyard	1
Hoquiam	12
Kapowsin	1
Kent	1
La Conner	1
Leavenworth	2
Lyle	1
Lynden	1
McCleary	1
Montesano	2
Mt. Vernon	2
Neah Bay	1
Oakdale	2
Olympia	8
Orting	2
Port Angeles	11
Port Townsend	5
Pullman	3
Puyallup	4
Renton	4
Riverside	1
Rosalia	1
Roslyn	2
Seattle	114
Sedro Woolley	2
Sequim	1
Spangle	1
Spokane	55
South Bellingham	2
Stellacoom	1
Sumas	1
Sumner	3
Tacoma	98
Tekoa	2
Toppenish	2
Vancouver	5
Walla Walla	6
Wapato	2
Washougal	1
Wenatchee	2
White Salmon	1
Wilkeson	4
Yakima	13

**SUMMARY OF CONDEMNATIONS MADE BY THE STATE DEPARTMENT
OF AGRICULTURE, DIVISION OF FOODS, FEEDS, ETC.**

FOODS.

Canned Goods.

	<i>Cans</i>	<i>Totals</i>
Fish—Miscellaneous	2,597	
Fish—Salmon	55,285	57,882
Fruits		2,758
Marshmallows		8
Meats		274
Milk		616
Miscellaneous		160
Oysters and clams		7
Pork and beans		1
Soups		34
Vegetables	1,004	62,694

Bottled Goods.

	<i>Bottles</i>	
Capers	72	
Catsup	2	
Chili	8	
Dressing	73	
Extracts	332	
Fountain fruits	11	
Horseradish	38	
Jams and jellies	33	
Miscellaneous	210	
Nectar	1	
Olives	281	
Pickles	869	
Pimento	8	
Peanut butter	4	
Relish	18	
Sauces (Worcestershire, etc.)	63	2,019

Package Goods.

	<i>Packages</i>	
Baking powder	58	
Cereal products	112	
Cheese	386	
Fruit—dried	78	
Spices	188	
Vegetables—dried	13	335

Bulk Goods.

	<i>Pounds</i>	
Cereals	70	
Fish	60,986	
Flour	341	
Fruits	4,623 1/2	
Meats	5,016 1/2	
Nuts	273	
Poultry	1,772	
Vegetables	15,350	88,432

Eggs.

	<i>Dozen</i>	
Eggs	2,730	2,730

Miscellaneous.

Olives	<i>Bbls.</i>	1	
Cream	<i>Gals.</i>	10	
Utensils—cooking and baking	<i>Pcs.</i>	89	100

Drugs.		Packages
Blood remedies		4
Catarrh cures		14
Children and worm remedies.....		7
Cold and gripe cures.....		19
Colic cures.....		75
Corn remedies		2
Cough cures		8
Fever remedies		16
Fluid extracts.....		6
Kidney and liver remedies.....		7
Laxatives		14
Miscellaneous		40
Salves and ointments.....		1
Syrups		7
Pharmaceuticals		16
Rheumatic remedies		14
		250
		157,060 parcels
Summary.		
Canned goods	62,694	
Bottled goods	2,019	
Package goods.....	835	
Bulk goods	88,432	
Eggs	2,730	
Miscellaneous	100	
		156,810
Drugs	250	
Total condemnations		157,060 parcels

SUMMARY OF PROSECUTIONS MADE BY THE STATE DEPARTMENT OF AGRICULTURE, DIVISION OF FOODS, FEEDS, ETC.

Benton County.

- No. 145—State of Washington v. J. P. Connolly. Charge: Selling decomposed salmon. Fined \$75 and costs.

Chelan County.

- No. 290—State of Washington v. Jim Sing. Charge: Refilling Lea & Perrin's bottles. Fined \$25 and costs.
 No. 291—State of Washington v. Brocking & Mosher. Charge: Refilling Lea & Perrin's bottles. Fined \$25 and costs.
 No.—State of Washington v. Frank Yama. Charge: Refilling Lea & Perrin's bottles. Fined \$25 and costs.
 No.—State of Washington v. S. Ness. Charge: Possession of filthy flour. Fined \$25 and costs.

Clallam County.

- No. 237—State of Washington v. Farmers' Market. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.
 No. 238—State of Washington v. G. Ellinger. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.
 No. 239—State of Washington v. Cook & Johnson. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.

Clarke County.

- No. 2249—State of Washington v. I. Sutherland. Charge: Possession filthy flour. Fined \$25 and costs.
 No. 2589—State of Washington v. Fullenweider & Son. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.
 No. 2590—State of Washington v. Fullenweider & Son. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.
 No. 2588—State of Washington v. W. Carmichael. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.
 No. 2587—State of Washington v. A. Collins. Charge: Selling sub-standard canned milk. Fined \$25 and costs.

Cowlitz County.

- No.—State of Washington v. C. A. Pauly. Charge: Adulterating Hamburger with Freez-em. Fined \$20 and costs.

Grays Harbor County.

- No. 347—State of Washington v. Renderich & Raboosch. Charge: Refilling Lea & Perrin's bottles. Fined \$25 and costs.
 No. 349—State of Washington v. C. Julius. Charge: Refilling Lea & Perrin's bottles. Fined \$25 and costs.
 No. 354—State of Washington v. Jim Marzous. Charge: Possession of filthy flour. Fined \$25 and costs.
 No. 353—State of Washington v. N. M. Randish. Charge: Refilling Lea & Perrin's bottles. Fined \$25 and costs.

King County.

- No.—State of Washington v. Seattle & Puget Sound Packing Company. Charge: Selling decomposed salmon. Fined \$100 and costs.
 No.—State of Washington v. Monroe Lewis, president, S. & P. S. P. Co. Charge: Selling decomposed salmon. Fined \$100 and costs.
 No.—State of Washington v. Sigmund Lewis, vice-president, S. & P. S. P. Co. Charge: Selling decomposed salmon. Fined \$50 and costs.
 No.—State of Washington v. J. P. Connolly, traveling salesman, S. & P. S. P. Co. Charge: Selling decomposed salmon. Fined \$50 and costs.
 No. 6978—State of Washington v. John Fischer. Charge: Selling immature, unwholesome veal. Fined \$50 and costs.
 No. 6557—State of Washington v. Tony Pappas. Charge: Operating basement bakery. Ordered to discontinue.
 No. 6896—State of Washington v. Sand L. Brown. Charge: Possession tainted and immature veal. Fined \$50 and costs.
 No. 6979—State of Washington v. A. Otts. Charge: Possession immature and unwholesome veal. Fined \$40 and costs.
 No. 7142—State of Washington v. C. H. Bruce. Charge: Selling immature veal. Fined \$40 and costs.
 No.—State of Washington v. S. L. Brown. Charge: Selling immature veal. Fined \$100 and costs.
 No. 7344—State of Washington v. Ed Nishio. Charge: Possession filthy flour. Fined \$25 and costs.
 No. 7343—State of Washington v. C. Osawa. Charge: Possession filthy flour. Fined \$25 and costs.
 No. 7342—State of Washington v. Anthos Grigoris. Charge: Refilling Lea & Perrin's bottles. Forfeited bond, \$5.
 No. 7343—State of Washington v. Anthos Grigoris. Charge: Refilling Lea & Perrin's bottles. Forfeited bond, \$5.
 No.—State of Washington v. C. C. Frederickson. Charge: Selling immature veal. Fined \$25 and costs.
 No.—State of Washington v. Frank Umchilmski. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.
 No. 7573—State of Washington v. Peter J. Hessler. Charge: Selling immature veal. Fined \$50 and costs.
 No. 7101—State of Washington v. Lehmann Brothers. Charge: Adulterating stock feeds. Dismissed.
 No. 7719—State of Washington v. George Pheffer. Charge: Selling immature veal. Fined \$25 and costs.

Lewis County.

- No. 272—State of Washington v. I. A. Muzzleworth. Charge: Refilling Lea & Perrin's bottles. Fined \$25 and costs.

Lincoln County.

- No. 233—State of Washington v. Odessa Meat Co. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.
 No.—State of Washington v. F. J. Field. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.

Jefferson County.

- No. 147—State of Washington v. F. L. Terry. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.

Pierce County.

- No. 5349—State of Washington v. G. Ononyo. Charge: Possession of filthy flour. Fined \$25 and costs.
- No. 5348—State of Washington v. T. Tayuchi. Charge: Possession of filthy flour. Fined \$25 and costs.
- No. 5395—State of Washington v. E. G. Havel. Charge: Refilling Lea & Perrin's sauce bottles. Fined \$25 and costs.
- No. 5394—State of Washington v. I. Oino. Charge: Refilling Lea & Perrin's sauce bottles. Acquitted.
- No. 11546—State of Washington v. E. A. Feddersen. Charge: Selling Oleomargarine without exhibiting sign. Fined \$25 and costs.
- No. 11547—State of Washington v. Beck Bros. Charge: Maintaining filthy restaurant. Fined \$50 and costs.
- No. 11548—State of Washington v. William Nicholas. Charge: Selling wormy walnuts. Fined \$25 and costs.
- No. 11549—State of Washington v. R. Wakimoto. Charge: Possession of filthy bread. Fined \$25 and costs.
- No. 11550—State of Washington v. G. Nouys. Charge: Possession of filthy oatmeal. Fined \$25 and costs.
- No. 11552—State of Washington v. Fred Sneeberger. Charge: Selling Oleomargarine without exhibiting sign. Acquitted.
- No. 11557—State of Washington v. Tony Bazich. Charge: Refilling Lea & Perrin's bottles. Fined \$25 and costs.
- No. 11951—State of Washington v. Fred Sneeberger. Charge: Using Oleomargarine without displaying sign. Dismissed.
- No.—State of Washington v. B. C. Rosser. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.

Skagit County.

- No. 222—State of Washington v. C. C. Woolen. Charge: Possession of veal unfit for food. Fined \$25 and costs.
- No. 223—State of Washington v. Arnid Olsen. Charge: Offering for sale veal unfit for food. Fined \$25 and costs.
- No. 224—State of Washington v. Mert McKee. Charge: Offering for sale veal unfit for food. Fined \$25 and costs.
- No. 225—State of Washington v. Mert McKee. Charge: Offering for sale veal unfit for food. Dismissed.
- No. 226—State of Washington v. B. S. Relkl. Charge: Offering for sale veal unfit for food. Fined \$25 and costs.
- No. 227—State of Washington v. R. W. Isbill. Charge: Selling veal unfit for food. Fined \$25 and costs.
- No. 228—State of Washington v. W. E. White. Charge: Offering for sale veal unfit for food. Fined \$25 and costs.
- No. 229—State of Washington v. Joe Cann. Charge: Offering for sale veal unfit for food. Fined \$25 and costs.
- No. 237—State of Washington v. L. M. Morgan. Charge: Offering for sale veal unfit for food. Fined \$25 and costs.
- No. 238—State of Washington v. J. O'Brien. Charge: Offering for sale veal unfit for food. Fined \$25 and costs.
- No. 239—State of Washington v. P. C. Dybbro. Charge: Offering for sale veal unfit for food. Fined \$25 and costs.
- No. 230—State of Washington v. B. H. Crisp. Charge: Offering for sale veal unfit for food. Fined \$25 and costs.
- No. 231—State of Washington v. E. L. Stevens. Charge: Offering for sale veal unfit for food. Dismissed.

Snohomish County.

- No. 2907—State of Washington v. Seattle & Puget Sound Packing Company. Charge: Selling decomposed and putrid canned salmon. Fined \$100 and costs.
- No. 2908—State of Washington v. Sigmund Lewis, vice-president, S. & P. S. P. Co. Charge: Selling decomposed and putrid canned salmon. Fined \$500 and costs.
- No. 2928—State of Washington v. J. Rygg. Charge: Offering for sale veal unfit for food. Fined \$25 and costs.
- No. 2929—State of Washington v. Isaac Rygg. Charge: Offering for sale veal unfit for food. Fined \$25 and costs.
- No. 2984—State of Washington v. I. A. Rygg. Charge: Adulterating Hamburger with Freez-em. Fined \$40 and costs.
- No. 2979—State of Washington v. M. L. Brown. Charge: Selling immature veal. Fined \$25 and costs.

Spokane County.

- No.—State of Washington v. W. S. Gilfre. Charge: Selling adulterated sausage. Fined \$25 and costs.
- No. 6211—State of Washington v. S. Lewis (King County). Charge: Selling decomposed salmon—Spokane County. Fined \$50 and costs.
- No. 6212—State of Washington v. J. P. Connolly of King County. Charge: Selling decomposed salmon—Spokane County. Fined \$50 and costs.
- No. 6213—State of Washington v. J. P. Connolly of King County. Charge: Selling decomposed salmon—Spokane County. Fined \$50 and costs.
- No. 1999—State of Washington v. Muzzy & Van Hersett. Charge: Possession filthy flour. Fined \$10 and costs.
- No. 2001—State of Washington v. E. G. McWilliams. Charge: Possession filthy flour. Fined \$10 and costs.
- No. 2002—State of Washington v. Sam Petre. Charge: Possession filthy flour. Fined \$25 and costs.
- No. 2003—State of Washington v. B. Brunell. Charge: Possession filthy flour. Fined \$10 and costs.
- No. 2010—State of Washington v. Spokane Seed Company. Charge: Adulteration poultry feed. Dismissed with costs.
- No. 2011—State of Washington v. Spokane Seed Company. Charge: Adulteration poultry feed. Fined \$25 and costs.
- No. 2012—State of Washington v. Inland Seed Company. Charge: Adulteration Poultry feed. Fined \$25 and costs.
- No. 2013—State of Washington v. J. W. Walsh. Charge: Refilling Lea & Perrin's bottles. Fined \$25 and costs.
- No. 2000—State of Washington v. Spokane Hotel Company. Charge: Possession filthy flour. Fined \$10 and costs.

Stevens County.

- No.—State of Washington v. John Furst. Charge: Selling diseased carcass of beef. Fined \$25 and costs.
- No.—State of Washington v. Arnold & Todd. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.

Thurston County.

- No.—State of Washington v. Wm. Kost. Charge: Possession filthy flour. Fined \$25 and costs.
- No. 525—State of Washington v. Bolster & Barnes. Charge: Possession filthy flour. Fined \$25 and costs.
- No. 524—State of Washington v. M. Koff. Charge: Possession of filthy flour. Fined \$25 and costs.
- No. 525—State of Washington v. Louis Dorrnecker. Charge: Possession filthy flour. Fined \$25 and costs.

Walla Walla County.

- No. 1765—State of Washington v. Lee Gee. Charge: Refilling Lea & Perrin's bottles. Fined \$25 and costs.
- No. 1773—State of Washington v. Chas. Tung. Charge: Filth in restaurant. Fined \$25 and costs.
- No. 1776—State of Washington v. B. Y. Cain. Charge: Refilling Lea & Perrin's bottles. Fined \$25 and costs.
- No. 1779—State of Washington v. John Bechtold. Charge: Possession filthy flour. Fined \$25 and costs.
- No. 1782—State of Washington v. J. E. Hawkins. Charge: Possession filthy flour. Fined \$25 and costs.
- No. 1785—State of Washington v. Walla Walla Meat Co. Charge: Adulterating Hamburger with Freez-em. Fined \$30 and costs.

Whatcom County.

- No.—State of Washington v. A. Stunurman. Charge: Offering for sale veal unfit for food. Fined \$25 and costs.
- No. 432—State of Washington v. Arthur Bishop. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.
- No. 431—State of Washington v. Hans Overleitner. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.
- No. 462—State of Washington v. Henry Ford. Charge: Misbranding stock feeds. Judgment suspended.
- No. 463—State of Washington v. F. J. Farley. Charge: Misbranding stock feeds. Judgment suspended.

Whitman County.

- No.—State of Washington v. Henry Behnvens. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.
 No.—State of Washington v. M. Overly. Charge: Adulterating Hamburger with Freez-em. Fined \$25 and costs.
 No.—State of Washington v. M. D. Overby. Charge: Adulterating sausage with sulphite. Fined \$25 and costs.
 No. 13157—State of Washington v. J. P. Connolly. Charge: Selling putrid canned salmon. Fined \$50 and costs.
 No. 13158—State of Washington v. J. P. Connolly. Charge: Selling putrid canned salmon. Fined \$50 and costs.
 No. 13159—State of Washington v. J. P. Connolly. Charge: Selling putrid canned salmon. Fined \$25 and costs.
 No. 13160—State of Washington v. J. P. Connolly. Charge: Selling putrid canned salmon. Fined \$25 and costs.

Yakima County.

- No. 961—State of Washington v. Richelleu Cafe. Charge: Refilling Lea & Perrin's sauce bottles. Fined \$25 and costs.
 No. 962—State of Washington v. John Keehtel. Charge: Refilling Lea & Perrin's sauce bottles. Fined \$25 and costs.
 No. 963—State of Washington v. Red Apple Cafe. Charge: Refilling Lea & Perrin's sauce bottles. Fined \$25 and costs.

Kittitas County.

- No. 170—State of Washington v. G. A. Masuda. Charge: Refilling Lea & Perrin's sauce bottles. Fined \$25 and costs.
 No. 24—State of Washington v. F. Bugin. Charge: Possession filthy flour. Fined \$25 and costs.
 No. 145—State of Washington v. Mr. Batassa. Charge: Possession filthy flour. Fined \$25 and costs.
 No. 144—State of Washington v. John Price. Charge: Possession filthy flour. Fined \$25 and costs.
 No. 143—State of Washington v. John Schoder. Charge: Possession filthy flour. Fined \$25 and costs.
 No. 25—State of Washington v. John Bordesous. Charge: Possession filthy flour. Fined \$25 and costs.

Total fines—\$3,770.

Summary by Counties:

Benton County	1	\$75 00	
Chelan County	4	100 00	
Clallam County	3	75 00	
Clarke County	5	125 00	
Cowlitz County	1	20 00	
Grays Harbor County.....	4	100 00	
Kittitas County	6	150 00	
King County	19	765 00	
Lewis County	1	25 00	
Lincoln County	2	50 00	
Jefferson County	1	25 00	
Pierce County	13	275 00	
Skagit County	13	275 00	
Snohomish County	6	715 00	
Spokane County	13	315 00	
Stevens County	2	50 00	
Thurston County	4	100 00	
Walla Walla	6	155 00	
Whatcom County	5	75 00	
Whitman County	7	225 00	
Yakima	3	75 00	\$3,770 00

Number of prosecutions made.....	119	
Number cases dismissed	5	
Number cases acquitted	2	
Number cases forfeited bond	2	
Number cases judgment suspended	2	
Number cases ordered to discontinue basement bakery, no fine	1	
Number cases fined	107	119

FOOD SAMPLES ANALYZED.

KIND	Legal	Illegal	Doubtful	Totals
Cocoa	1	2	1	4
Confectionery	9	..	..	9
Corn (canned)	4	19	..	23
Beans (canned)	..	..	3	3
Eggs (canned)	..	10	..	10
Eggs (fresh)	..	48	..	48
Extracts (flavoring)	17	39	1	57
Filth (bins, sinks, kitchens)	..	5	..	5
Fish (except salmon)	8	3	2	13
Flour	2	31	..	33
Fruits	6	1	..	7
Jams and jellies	45	1	..	46
Jelly powders	8	..	..	8
Lard	2	..	..	2
Meat	13	36	4	53
Milk (condensed)	32	8	..	40
Miscellaneous	15	5	4	24
Peanut butter	4	..	..	4
Preserves	6	..	..	6
Poultry	2	5	..	7
Salmon	58	182	1	241
Soft drinks	25	20	23	68
Sugar	3	..	..	3
Vinegar	10	9	2	21
Totals—				
Food	270	424	41	735
Drugs	65	17	..	82
	345	441	41	817

DRUG SAMPLES ANALYZED.

	Legal	Illegal	Totals		Legal	Illegal	Totals
Alcoholic liquor	..	1	1	Tincture iodine	8	3	11
Antikamnia tablets	3	..	3	Powdered licorice	..	1	1
Aspirin	1	..	1	Lotions	..	2	2
Barium sulphate	1	..	1	Lung balsam	1	..	1
B. K.	1	..	1	Mineral (Talcum)	1	..	1
Bronchial troches	1	..	1	Olive oil	2	..	2
Brown mixture	..	1	1	Prescriptions	2	..	2
Spirits camphor	5	1	6	Preservatives	3	..	3
Camphorated oil	2	..	2	Peroxide hydrogen	2	..	2
Capaeum (powdered)	1	..	1	Powders	3	..	3
Citric acid	1	..	1	Quinine	1	..	1
Cold and gripe remedies	6	..	6	Salts	1	..	1
Color	..	1	1	Salt peter	1	..	1
Copenhagen snuff	1	..	1	Syrup	1	..	1
Corn remedies	2	..	2	Tablets	2	..	2
Formaldehyde	..	1	1	Turpentine	2	..	2
Jamaica ginger	1	..	1	Water	1	..	1
Glycerine	3	..	3	Whiskey	..	1	1
Headache remedy	3	..	3	Oil of wintergreen	1	..	1
Hair tonic	1	5	6				
	33	10	43	Totals	32	7	39
					65	17	82

STOCK FEED SAMPLES ANALYZED.

	Legal	Illegal	Doubtful	Totals
Alfalfa feeds	2	.....	.....	2
Barley feeds	9	.....	.....	9
Beet pulp	1	.....	.....	1
Bran	6	.....	1	7
Dairy feed and chop	7	5	3	15
Hog feed .....	.....	1	.....	1
Horse feed .....	.....	1	.....	1
Middlings	2	2	1	5
Oat feeds	9	.....	1	10
Shorts	8	.....	1	9

FEED MEALS

Alfalfa meal	1	.....	.....	1
Cornmeal	3	1	.....	4
Cottonseed meal .....	.....	.....	2	2
Linseed meal	3	.....	.....	3
Pig meal	1	1	.....	2
Rye meal	3	.....	.....	3
Rye flour .....	.....	2	.....	2
Soy bean meal	3	.....	.....	3
Totals	58	13	9	80

POULTRY FEED SAMPLES ANALYZED.

	Legal	Illegal	Doubtful	Totals
Scratch	14	2	1	17
Corn feeds	2	.....	.....	2
Oats (ground)	1	.....	.....	1
Egg foods	3	2	2	7
Mashes	4	7	.....	11
Meat scrap and meal	2	2	.....	4
Fish meal .....	.....	1	.....	1
Bone meal	1	.....	.....	1
Totals	27	14	3	44

Stock feeds 80
Poultry feeds 44

Total feeds 124
Legal 85
Illegal 27
Doubtful 12 124

ANALYTICAL FEES FOR FERTILIZERS COLLECTED.

Aabing Boyce Seed Co., Seattle, Wash.....	\$80 00
American Minerals Producing Co., Tacoma, Wash.....	86 00
American Pacific Whaling Co., Bay City, Wash.....	18 00
Armour & Co., Spokane, Wash.....	30 00
Balfour Guthrie Co. (for U. S. Whaling Co.).....	24 00
S. Blachley, Spokane, Wash.....	24 00
Oarstens Packing Co., Spokane, Wash.....	18 00
Oarstens Packing Co., Tacoma, Wash.....	36 00
James Henry, Seattle, Wash.....	24 00
Jacob Kaufman, Seattle, Wash.....	18 00
Chas. H. Lilly Co., Seattle, Wash.....	186 00
Nitrate Agencies Co., Seattle, Wash.....	6 00
Nitro-Phosphate Fertilizer Co., Tacoma, Wash.....	48 00
Pacific Guano and Fertilizer Co.....	18 00
Portland Seed Co., Portland, Ore.....	144 00
Randall & McLoughlin, Seattle, Wash.....	18 00
Robinson Fisheries Co., Anacortes, Wash.....	24 00
Sea Products Co., Everett, Wash.....	24 00
Union Meat Co.....	132 00
Union Meat Co., North Portland, Ore.....	186 00
Walla Walla Meat and Cold Storage Co., Walla Walla, Wash.....	90 00
Western Fertilizer Co., San Francisco, Cal.....	18 00

\$1,122 00

FERTILIZER SAMPLES TAKEN.

	Legal	Illegal	Doubtful	Totals
Nitrates of soda.....	7	4		11
Potash.....	8	5		13
Phosphate.....	12	3		15
Fertilizers (general).....	11	22	3	36
Bone, meat, blood meals.....	26	12		38
Tankage.....	9	7		16
Guano.....	9	4		13
Totals.....	82	57	3	142

SUMMARY OF TOWNS INSPECTED, BY COUNTIES.

COUNTIES	INSPECTORS					
	Adams	Coffin	Collier	Gray	Henderson	Jones
Adams.....					Lind	Lind
Benton.....			Prosser			
Benton.....			Kiona			
Benton.....			Kennewick			
Benton.....			Richland			
Chelan.....		Cashmere			Peshastin	Peshastin
Chelan.....		Leavenworth			Leavenworth	Leavenworth
Chelan.....		Malaga			Cashmere	
Chelan.....		Wenatchee	Wenatchee		Wenatchee	Cashmere
Chelan.....					Monitor	Wenatchee
Chelan.....					Entiat	Monitor
Chelan.....					Lakeside	Lakeside
Chelan.....					Chelan	Chelan
Clallam.....		Neah Bay			Port Angeles	Sequim
Clallam.....		Port Angeles			Sequim	Port Angeles
Clallam.....		Sequim				
Clarke.....		Camas			Amboy	Camas
Clarke.....		Ridgefield			Brush	LaGrande
Clarke.....		Vancouver			Prairie	Vancouver
Clarke.....		Cumberland			Crawford	Washougal
Clarke.....		Washougal			Ellsworth	Felida
Clarke.....					Etna	
Clarke.....					Felida	
Clarke.....					Helson	
Clarke.....					LaCenter	
Clarke.....					LaGrande	
Clarke.....					Orchards	
Clarke.....					Ridgefield	
Clarke.....					Vancouver	
Clarke.....					Washougal	
Columbia.....		Dayton				
Cowlitz.....		Woodland			Yacolt	Kelso
Cowlitz.....					Oastlerock	Kalama
Cowlitz.....					Kelso	Oastlerock
Cowlitz.....					Kalama	
Cowlitz.....					Olequa	
Cowlitz.....					Ostrander	
Cowlitz.....					Woodland	
Douglas.....		Columbia River				
Douglas.....			Waterville		Waterville	Waterville
Douglas.....			Douglas		Douglas	Douglas
Douglas.....			Withrow		Bridgeport	Bridgeport
Douglas.....			Bridgeport		Pateros	Pateros
Douglas.....			Orondo		Orondo	Orondo
Douglas.....					Farmer	Farmer
Douglas.....					Mansfield	Mansfield
Ferry.....			Republic		Orient	Republic
Ferry.....			Malco		Boyd	Malco
Ferry.....			Curlew		Marcus	Curlew
Ferry.....			Danville		Laurier	Danville
Ferry.....			Laurier		Ferry	Orient
Ferry.....			Orient			Ferry
Ferry.....			Boyd			Boyd
Ferry.....			Ferry			
Franklin.....	Pasco		Pasco		Pasco	Pasco
Franklin.....						Connell
Garfield.....	Pomeroy					
Grant.....		Ephrata			Coulee City	Ephrata
Grant.....		Quincy				Coulee City

SUMMARY OF TOWNS INSPECTED, BY COUNTIES.—Continued.

COUNTIES	INSPECTORS					
	Adams	Coffin	Collier	Gray	Henderson	Jones
Grant.....		Trinidad			Soap Lake	Soap Lake
Grant.....		Soap Lake			Adrian	Adrian
Grant.....					Wilson Creek	Wilson Creek
Grant.....						Hartline
Grays Harbor.....		Aberdeen	Aberdeen		Aberdeen	Aberdeen
Grays Harbor.....		Elma	Elma		Elma	Elma
Grays Harbor.....		Montesano	Montesano		Montesano	Montesano
Grays Harbor.....		Westport	Westport		Westport	Westport
Grays Harbor.....		Ocosta	Ocosta		Ocosta	Ocosta
Grays Harbor.....		Bay City	Bay City		Bay City	Bay City
Grays Harbor.....			Hoquiam		Hoquiam	Hoquiam
Grays Harbor.....					Cosmopolis	
Grays Harbor.....					Malone	
Grays Harbor.....					Oakville	
Grays Harbor.....					Porter	
Grays Harbor.....					Satsop	
Jefferson.....		Chlmacum				
Jefferson.....		Pt. Townsend				
Jefferson.....		Quileens				
King.....	Seattle	Auburn	Barneston		Seattle	Seattle
King.....		Enumclaw	Bryn Mawr		Bryn Mawr	Kent
King.....	Kent	Burton	Seattle		Renton	Auburn
King.....	Auburn	Burlington	Selleck		Enumclaw	O'Brien
King.....	Enumclaw	Barneston	Kent		Bayne	Kirkland
King.....	Des Moines	Kent	Enumclaw		Black	
King.....					Diamond	North Bend
King.....	Redondo	Renton	Auburn			
King.....	Zenith	Seattle			Duval	Selleck
King.....		Selleck			Falls City	Barneston
King.....		Black				
King.....		Diamond			Issaquah	Enumclaw
King.....		Bayne			Novelty	
King.....		Kanasket			North Bend	
King.....					Selleck	
King.....					Snoqualmie	
King.....					Tolt	
Kittitas.....	Ellensburg	Ellensburg	Thorp		Cle Elum	Roslyn
Kittitas.....	Cle Elum	Roslyn			Roslyn	Cle Elum
Kittitas.....		Cle Elum			Ellensburg	Ellensburg
Kitsap.....		Bremerton				Bremerton
Klickitat.....	Sunnydale	Bingen				Lyle
Klickitat.....		Lyle				Goldendale
Klickitat.....		White				
Klickitat.....		Salmon				White
Klickitat.....		Goldendale				Salmon
Lewis.....	Adna	Centralia	Centralia		Adna	Adna
Lewis.....	Chehalis	Lindberg	Chehalis		Chehalis	Chehalis
Lewis.....	Dryad	Mineral			Curtis	Curtis
Lewis.....	Doty	Morton			Dryad	Dryad
Lewis.....	Littell				Doty	Doty
Lewis.....	McCormick				Evaline	Klaber
Lewis.....	Pe Ell				Littell	Littell
Lewis.....					Napavine	Morton
Lewis.....					Pe Ell	Mineral
Lewis.....					Toledo	McCormick
Lewis.....					Vader	Lindberg
Lewis.....					Walville	Pe Ell
Lewis.....					Winlock	Walville
Lincoln.....	Davenport	Davenport		Davenport	Davenport	Davenport
Lincoln.....		Harrington		Odessa	Odessa	Harrington
Lincoln.....					Harrington	Bluestem
Lincoln.....					Creston	Odessa

SUMMARY OF TOWNS INSPECTED, BY COUNTIES.—Continued.

COUNTIES	INSPECTORS					
	Adams	Coffin	Collier	Gray	Henderson	Jones
Lincoln.....					Wilbur	Lamona
Lincoln.....					Govan	Edwall
Lincoln.....					Almira	Irby
Lincoln.....					Irby	Almira
Lincoln.....					Lamona	Waukon
Lincoln.....					Bluestem	
Lincoln.....					Waukon	
Mason.....			Shelton			
Okanogan.....			Brewster		Brewster	Brewster
Okanogan.....			Methow		Methow	Riverside
Okanogan.....			Twisp		Riverside	Twisp
Okanogan.....			Winthrop		Winthrop	Winthrop
Okanogan.....			Malott		Malott	Methow
Okanogan.....			Okanogan		Okanogan	Okanogan
Okanogan.....			Omak		Omak	Omak
Okanogan.....			Riverside		Carlton	Grand Forks
Okanogan.....			Conconully		Conconully	Conconully
Okanogan.....			Tonasket		Tonasket	Oroville
Okanogan.....			Oroville		Oroville	Molson
Okanogan.....			Molson		Molson	Chesaw
Okanogan.....			Chesaw		Chesaw	Carlton
Pacific.....	Raymond				Francis	Long Beach
Pacific.....	Long Beach				Globe	Holcomb
Pacific.....	Holcomb				Lebam	Lebam
Pacific.....	Lebam				Menlo	Menlo
Pacific.....	Menlo				South Bend	Willapa
Pacific.....	Willapa				Willapa	Ilwaco
Pacific.....	Ilwaco				Long Beach	Chinook
Pacific.....	Chinook				Seaview	Seaview
Pacific.....	Seaview				Ilwaco	Ilwaco
Pacific.....	South Bend				Chinook	Chinook
Pierce.....	Tacoma	Buckley	Lakeview		Sylvan	Tacoma
Pierce.....	Hillhurst	Orting	Tacoma		Tacoma	Alder
Pierce.....	McKenna	Tacoma	Sumner		Alder	Ashford
Pierce.....	Roy	Puyallup	Stellacoom		Alderton	Alderton
Pierce.....	Raymond	Alder	Puyallup		Burnett	Burnett
Pierce.....	Puyallup	Ashford	Gig Harbor		Buckley	Eatonville
Pierce.....		Carbonado			Carbonado	Elbe
Pierce.....		Elbe			Eatonville	Hillhurst
Pierce.....		Kapowsin			Elbe	Kapowsin
Pierce.....		National			Hillhurst	Loveland
Pierce.....		Wilkeson			Kapowsin	McMillan
Pierce.....					Loveland	McKenna
Pierce.....					McKenna	Roy
Pierce.....					McMillan	Orting
Pierce.....					Orting	Raymond
Pierce.....					Raymond	Spanaway
Pierce.....					Parkland	South Prairie
Pierce.....					Roy	
Pierce.....					Spanaway	
Pierce.....					South Prairie	
Pierce.....					Wilkeson	
Skagit.....	Sedro					
Skagit.....	Woolley	Clear Lake	Anacortes		Mt. Vernon	Anacortes
Skagit.....	Burlington	Mt. Vernon	Sedro		Avon	Mt. Vernon
Skagit.....	Anacortes	Sedro	Woolley			
Skagit.....		Woolley	Mt. Vernon			Clear Lake
Skagit.....			Burlington			Conway
Skagit.....						Burlington
Skagit.....						Sedro
Skagit.....						Woolley
Skagit.....						Stevenson
Skamania.....		Stevenson				
Skamania.....		Carson				

SUMMARY OF TOWNS INSPECTED, BY COUNTIES.—Continued.

COUNTIES	INSPECTORS					
	Adams	Coffin	Collier	Gray	Henderson	Jones
Snohomish.....	Everett	Everett	Everett		Everett	Everett
Snohomish.....	Snohomish	Edmonds	Snohomish		Snohomish	Snohomish
Snohomish.....			Arlington		Arlington	Arlington
Snohomish.....			Marysville		Stanwood	Stanwood
Snohomish.....					Silvana	Silvana
Snohomish.....					Monroe	Lake Stevens
Snohomish.....						Hartford
Snohomish.....						Lowell
Snohomish.....						Marysville
Snohomish.....						Florence
Spokane.....	Spokane	Spokane	Spokane	Spokane	Spokane	Spokane
Spokane.....	Deer Park			Hillyard	Springdale	Deer Park
Spokane.....	Dartford			Deer Park	Valleyford	Mead
Spokane.....	Dennison			Valleyford	Fresman	Colbert
Spokane.....				Freeman	Rockford	Granite
Spokane.....				Rockford	Fairfield	Chatteroy
Spokane.....				Fairfield	Waverly	Opportunity
Spokane.....				Waverly	Latah	Otis
Spokane.....				Latah	Espanola	Vera
Spokane.....						Hillyard
Spokane.....						Dartford
Spokane.....						Dennison
Stevens.....	Colville		Marcus	Chewelah	Colville	Gifford
Stevens.....	Gifford		Northport	Colville	Addy	Kettle Falls
Stevens.....	Kettle Falls		Meyer Falls		Clayton	Clayton
Stevens.....	Loon Lake		Colville		Northport	Springdale
Stevens.....	Grays		Addy		Cedonia	Chewelah
Stevens.....	Arden		Chewelah			Loon Lake
Stevens.....	Hunters		Springdale			Grays
Stevens.....	Fruitland		Clayton			Arden
Stevens.....						Colville
Stevens.....						Fruitland
Stevens.....						Hunters
Stevens.....						Valley
Stevens.....						Cedonia
Thurston.....	Olympia	Olympia	Olympia	Olympia	Olympia	Olympia
Thurston.....	Rainier	Tenino			Bucoda	Rainier
Thurston.....	Yelm	Bucoda			Gats	Tenino
Thurston.....	Lacey				Grandmound	Yelm
Thurston.....					Lacey	
Thurston.....					Rainier	
Thurston.....					Tenino	
Thurston.....					Yelm	
Walla Walla...	Walla Walla	Walla Walla	Walla Walla	Walla Walla		
Whatcom.....	Bellingham	Bellingham	Bellingham		Bellingham	Bellingham
Whatcom.....	Ferndale	Blaine			Sumas	Anacortes
Whatcom.....	Lynden	Lynden			Nooksack	Alger
Whatcom.....	Sumas	Sumas			Wahs	Conway
Whatcom.....		Everson			Lynden	Edson
Whatcom.....					Everson	Nooksack
Whatcom.....					Ferndale	Lynden
Whatcom.....						Blaine
Whatcom.....						Sumas
Whatcom.....						Ferndale
Whatcom.....						Everson
Whitman.....	Colfax	Colfax	Colfax	Colfax	Colfax	Pullman
Whitman.....	Palouse	Garfield	Tekoa		Tekoa	
Whitman.....	Dixie	Oakesdale	Oakesdale		Oakesdale	
Whitman.....	Waitsburg	Pullman	Garfield		Palouse	
Whitman.....	Pullman	Tekoa	Thornton		Thornton	
Whitman.....			Palouse		Steptoe	
Whitman.....			Steptoe		Garfield	

SUMMARY OF TOWNS INSPECTED, BY COUNTIES.—Concluded.

COUNTIES	INSPECTORS					
	Adams	Coffin	Collier	Gray	Henderson	Jones
Yakima.....	Yakima	Yakima	Yakima		Parker	Selah
Yakima.....	Selah	Toppenish			Selah	Parker
Yakima.....	Parker	Wapato			Yakima	Buena
Yakima.....					Sunnyside	Yakima
Yakima.....					Granger	Granger
Yakima.....					Outlook	Sunnyside
Yakima.....					Buena	Toppenish
Yakima.....					Toppenish	Wapato
Yakima.....					Wapato	Donald
Yakima.....					Donald	Naches

Many of the towns in this list were visited several times by the respective inspectors and a number of inspections made on each visit.

**SUMMARY OF WORK ACCOMPLISHED BY THE FOURTH DIVISION OF
THE STATE DEPARTMENT OF AGRICULTURE, JULY, AUGUST,
SEPTEMBER AND OCTOBER, 1918.**

Inspections: Including foods, feeds, fertilizers, drugs and bakery inspections		3,347
Oil	Gallonage	6,106,517
	Fees	\$12,213 86
Condemnations—		
Canned goods	Cans	10,368
Bottled goods	Bottles	270
Bulk goods	Pounds	118,073
Package goods	Packages	50 1/4
Eggs	Dozen	19 1/2
Drugs	Packages	9
Miscellaneous	Parcels	56
Total condemnations food and drugs.....		128,846 parcels
Towns visited		141
Samples taken		55
Prosecutions—		
Cases filed		41
GUILTY		35
Forfeited bond	6 41 41	
Total of fines.....		\$2,410 00

DIVISION OF OIL INSPECTIONS.

I am pleased to hand you herewith a complete tabulated statement of oil inspections for our third biennial report, dating from July 1, 1916, to June 30, 1918.

I do not know that it is necessary to preface this report with any particular introduction. The inspections have been carefully looked after and conscientiously made by each and every one engaged therein. We have had but few complaints relative to the quality of products inspected, and have had no litigation for violations of the law.

We have constantly and persistently looked into and after the matter of branding all products sent out. Each and every company has been supplied with sufficient stencils for said work. This portion of our work is of the greatest importance for the reason that under our law each and every vendor is required to sell his product at the gravity given by the state oil inspector.

We have a minimum standard for kerosene oil. We have no standard of gravity for gasoline, etc. This, however, should be corrected, and I trust we will be able to present a bill satisfactory to the legislature relative to these matters.

Attached you will find tabulated statement of all oils inspected by us for which we have received the usual legal inspection fees as fixed by the state.

We are also handing you herewith tabulated statement of the Standard Oil Company, covering the amount of gallonage inspected together with the fees thereof, for which no collections have been made.

In May, 1916, the Standard Oil Company brought suit against the State of Washington in the matter of collecting the inspection fees. This case was tried before Judge Wright in the Superior Court of Thurston County, who found for the Standard Oil Company. The case was then appealed to the Supreme Court of the state; was heard on the 14th day of February, 1917, and Judge Wright's decision reversed and the court ordered to dismiss suit. However, the Standard Oil Company, not being satisfied, appealed this case to the U. S. Supreme Court about February 23, 1917. The Standard Oil Company gave supersedeas bond for \$50,000.00. After the settlement of the case in the Superior Court the Standard Oil Company ceased to make any payments even to the registrar of the court. The matter has been pending since that time with no payments of any kind whatsoever. The case in the Supreme Court is now set for hearing on January 15, 1919.

Respectfully submitted,

S. P. WILSON,
State Oil Inspector.

SUMMARY OF OIL INSPECTIONS AND FEES.

DATE	Kerosene	Gasoline	Distillate	Naptha	Totals	Fees
1916—						
July	5,500	1,122,645	394,728	.....	1,522,873	\$3,047 04
August	5,380	769,062	356,621	.....	1,131,063	2,362 12
September	69,308	721,194	277,660	.....	1,068,162	2,186 32
October	112,218	647,302	355,207	.....	1,114,727	2,229 46
November	214,223	825,362	231,827	.....	1,270,912	2,541 81
December	144,289	581,669	156,461	.....	882,419	1,764 84
1917—						
January	130,047	577,532	207,123	Benzine	914,702	1,831 75
February	69,170	461,439	132,547	.....	663,156	1,327 81
March	45,160	571,191	319,890	.....	936,231	1,873 86
April	5,400	590,640	388,601	.....	984,641	1,969 28
May	200,167	844,668	369,547	1,150	1,415,562	2,832 73
June	3,705	828,423	216,462	2,200	943,094*	1,896 19
July	4,520	1,133,988	222,415	150	1,264,966*	2,531 35
August	13,093	929,412	268,414	2,450	1,161,833*	2,327 55
September	73,209	942,555	213,300	950	1,190,589*	2,381 61
October	129,090	1,010,600	137,442	150	1,277,292	2,555 59
November	165,049	974,661	461,443	.....	1,601,153	3,202 30
December	275,232	749,779	160,778	100	1,185,889	2,373 58
1918—						
January	40,231	603,345	200	150	643,776	1,289 67
February	230,662	951,966	271,179	.....	1,444,007	2,888 02
March .....	.....	529,309	131,520	.....	660,829	1,321 64
April	17,164	1,152,542	94,169	.....	1,263,815	2,531 89
May	82,377	1,179,644	275,743	.....	1,537,764	3,075 52
June	120,686	1,006,847	194,400	.....	1,321,933	2,645 74
	2,145,930	19,705,825	5,837,237	7,300	27,401,567	\$54,827 67

	Gals.		Gals.
* Sold out of the state.			
June.....	107,686	Kerosene.....	2,145,930
July.....	96,108	Gasoline.....	19,705,825
August.....	51,506	Distillate.....	5,837,237
September.....	39,425	Benzine.....	7,300
	294,725		27,696,392
Less amount shipped out of the state.....			294,725
			27,401,567

**REPORT OF OIL INSPECTIONS COVERING THE STANDARD OIL COMPANY
PRODUCTS, JULY 1, 1916, TO JUNE 30, 1918, ON WHICH
FEES HAVE NOT BEEN PAID.**

DATE	Kerosene	*Gasoline	Distillate	Naptha	Totals	Fees
Seattle						
1916—						
July	20,503	1,647,760			1,668,263	\$3,336 53
August	175,743	2,000,569			2,176,312	4,352 63
September	10,311	2,741,364			2,751,675	5,503 35
October	16,799	2,231,325			2,248,124	4,496 25
November	430,953	3,718,077			4,149,030	8,298 06
December	1,616,397	2,490,547			4,106,944	8,213 89
Total	2,270,706	14,829,642			17,100,348	\$34,200 71
1917—						
January	555,386	3,426,163			3,981,549	\$7,963 10
February	442,384	852,800			1,295,184	2,590 39
March	121,833	1,934,062			2,055,925	4,111 86
April	903,204	2,087,622			2,990,826	5,981 66
May	231,775	1,790,417			2,022,192	4,044 38
June	111,019	2,880,865			2,991,884	5,983 77
July	232,170	1,960,414	1,964,421		4,167,005	8,334 01
August	226,701	2,569,680	593,260		3,389,641	6,779 28
September		1,290,809	1,145,694		2,436,498	4,852 99
October	237,423	2,122,345	1,145,179	227,366	3,732,313	7,466 63
November	765,896	3,005,378	452,705		4,223,981	8,447 96
December	708,383	2,207,365	731,793		3,645,571	7,291 14
Total	4,534,186	26,138,480	6,023,042	227,366	36,923,074	\$73,846 15
1918—						
January	367,214	1,394,567	529,635		2,291,416	\$4,582 83
February	360,552	1,421,392			1,790,944	3,581 89
March	1,354,517	7,229,458	2,030,159		10,614,134	21,223 27
April	302,523	2,051,312	360,239		2,713,074	5,566 15
May	52,686	1,468,034	755,216		2,275,936	4,551 87
June	722,966	2,526,625	735,129		3,984,720	7,769 43
Total	3,129,477	16,091,388	4,419,373		23,640,243	\$47,230 48
Grand total— Seattle	9,934,369	57,059,510	10,442,420	227,366	77,663,655	\$155,827 34

DATE	Kerosene	*Gasoline	Distillate	Naptha	Totals	Fees
Tacoma						
1916—						
August	56,867	350,833	97,935		505,125	\$1,014 25
September						
October	6,481	199,870			206,351	412 70
November	179,199	379,043	93,699		651,941	1,303 88
December		361,553			361,553	723 11
Total	244,037	1,291,299	191,634		1,726,970	\$3,453 94
1917—						
January	10,289	253,394			263,683	\$527 37
March	353,020	232,333	123,080		708,433	1,416 87
April		196,789	96,340		293,129	586 26
May		600,000			600,000	1,200 00
June	121,189	642,591	131,277		895,057	1,790 01
July		970,489	123,190		1,093,679	2,187 36
August		681,806			681,806	1,363 61
September		327,777	144,648		472,425	944 85
October						
November		656,733			656,733	1,313 47
December		558,897	149,564		708,461	1,416 92
Total	484,496	5,120,809	768,099		6,373,406	\$12,746 72
Grand total— Tacoma	728,533	6,412,108	960,733		8,100,376	\$16,200 66

* Includes distillate also for first twelve months recorded.

REPORT OF INSPECTIONS OF STANDARD OIL COMPANY.—Concluded.

DATE	Kerosene	Gasoline	Distillate	Naptha	Totals	Fees
Portland						
1916—						
June	10,902	91,131	16,377	2,803	121,213	\$242 42
July	19,676	76,522	36,925	20	132,143	204 28
August	18,401	100,008	55,078	5,150	178,637	357 27
September	35,689	41,137	41,221	3,769	121,816	253 63
October	40,297	38,021	6,899	2,904	88,811	177 62
November	50,900	19,830	6,882	1,923	79,534	159 07
December	38,229	34,452	14,187	300	87,168	174 34
1917—						
January	74,475	16,654	11,156	10	102,295	204 59
February	43,342	13,380	25,723	.....	82,445	164 89
March	27,676	11,232	7,963	.....	46,870	93 74
April	28,997	96,749	47,516	1,270	102,532	205 06
May	9,412	50,858	13,145	2,043	80,458	160 91
June	19,030	206,946	46,044	1,862	274,782	549 56
July	18,487	271,671	57,124	3,935	351,167	702 33
August	54,587	218,544	108,836	3,002	380,029	700 05
September	33,206	220,125	56,411	2,623	312,565	624 73
October	60,553	259,152	72,457	2,536	394,698	789 88
November	46,983	203,936	8,232	769	259,870	519 74
December	62,579	168,589	62,087	54	293,299	586 57
1918—						
January	74,752	168,454	27,147	70	270,423	540 85
February	32,003	94,399	27,423	.....	153,825	307 65
March	40,523	161,346	27,166	.....	239,035	478 07
April	38,093	254,322	75,906	.....	368,411	736 82
May	40,276	305,173	57,506	.....	403,015	806 03
June	26,868	290,631	77,790	.....	395,289	790 58
Totals.....	943,835	3,342,860	998,291	35,123	5,320,108	\$10,640 18

SUMMARY.

	Kerosene	Gasoline	Distillate	Naptha	Totals	Fees
Seattle	9,934,369	57,069,510	10,442,420	227,366	77,663,655	\$155,327 34
Tacoma	728,535	6,412,108	959,733	.....	8,100,376	16,200 66
Portland.....	943,835	3,342,860	998,291	35,123	5,320,108	10,640 18
Totals.....	11,606,739	66,814,478	12,400,444	262,489	91,084,139	\$182,168 18

WASHINGTON STATE FAIR.

The biennium closing October 31, 1918, marks a wonderful growth in the Washington State Fair; the two fairs held during this period having, from the point of improvements, exhibits, attractions and paid admissions, far exceeded any of the past. More interest in every way is being manifest as the fair grows and the attendance becomes more statewide, until now it cannot be truthfully said that the fair is an institution that only attracts the local people. It now compares favorably in every way with any similar institutions held in the Pacific Northwest, and in some particulars excels. While the 1917 fair exceeded any former exhibitions held upon the grounds, the 1918 fair was even larger—every department, except that of livestock, being better filled. The lack of competent help in fitting and caring for the stock, together with excessive price of feed, prevented a number of exhibitors of the Pacific Northwest, as well as some of those living in a more remote section, who were accustomed to make the fair circuit each year, from showing, and in many cases the herds have been dispersed. This being one of the results of war we may expect to see our livestock exhibits grow less each year until such a time as conditions will have become normal.

Appropriations amounting to \$58,000.00 were made for the benefit of the State Fair by the 1917 legislature as follows: Salaries and wages, \$9,120.00; operation and maintenance, \$28,880.00; construction new grandstand, \$20,000.00. The grandstand was constructed in time for use of the 1917 fair, at a cost of \$20,591.38; the additional cost in excess of the appropriation being paid from the State Fair Fund arising from the proceeds of the 1917 fair. This building was much needed and is one of the factors that served to contribute to the success of the 1917 and 1918 fairs. It has a seating capacity of approximately 4,000. Most of the old grandstand was torn down and the serviceable lumber used in the construction of the new building. One section of the old building, the newer part, however, was moved to the north of its former location and made into a bleachers with a capacity of 1,000. Notwithstanding the increased capacity provided, these buildings proved inadequate on several occasions, and an addition to the grandstand should be constructed, which could be done at a comparatively small figure.

The receipts and disbursements for the biennium are as follows:

RECEIPTS.

Balance 1915 appropriation.....	\$2,417	35	
Balance 1916 state fair.....	1,041	12	
Appropriation 1917	58,000	00	
Cash receipts 1917 (state fair fund).....	32,139	24	
Cash receipts 1918 (state fair fund).....	55,510	14	\$129,107 85

DISBURSEMENTS.

From 1915 appropriation.....	\$2,417	35	
From 1918 appropriation.....	56,046	15	
From state fair fund.....	55,683	99	104,147 49
Balance available			\$14,960,36

This balance is credited to the several funds as follows:

Operation and maintenance.....	\$53	85
Salaries and wages.....	1,900	00
State fair	13,008	51
	<u>\$14,960</u>	<u>36</u>

Exclusive of the grandstand, there was expended during the blennium for permanent improvements at the fair grounds \$17,801.74, made up of the following items: Extra work on grandstand, \$591.38; fencing, \$416.00; engineering for irrigation system, \$201.00; irrigation system, \$1,571.63; extending water system, \$425.23; camp grounds (clearing, grading and leveling), \$105.00; new toilets and cesspools, \$305.00; woman's building (new roof and repairs), \$744.45; electric wiring in buildings and on grounds, \$1,274.05; drinking fountains, \$42.00; moving restaurants, paddock and bleachers, \$370.00; tearing down old grandstand, \$328.75; repairing stock barns, \$150.00; clearing ground for auditorium, \$60.00; cement steps to horticultural building, \$66.60; building auditorium, \$11,105.64.

There was also expended during the same period for equipment \$2,612.34, as follows: Opera chairs and moving picture outfit, \$750.00; service car (Chevrolet), \$675.00; street sprinkler, \$627.00; gasoline engine, \$106.00; gasoline stoves and equipment for children's demonstrations, \$133.90; range and plumbing children's restaurant, \$65.44; ticket machine, \$255.00.

Six hundred eighty-five dollars fifteen cents (\$685.15) was expended for paint, lumber, hardware, plumbing supplies and small equipment. Thus making a total of \$21,099.23 which was expended directly for the betterment and equipment of the plant:

The new auditorium, which was built at a cost of \$11,105.64, is a frame building 62 feet by 100 feet, with a stage 18 feet by 40 feet, having a seating capacity of 1,200. It is completely wired and equipped for the operation of a moving picture machine and contains a complete apparatus for projecting pictures. This building fills a long felt want, and during the 1918 State Fair a continuous program consisting of lectures, educational films and demonstrations emphasizing the work of the different departments was held during each day. Each evening during the week the United States Naval Training Band from the training station at Seattle rendered concerts, which were thoroughly enjoyed by the people who filled the building to overflowing.

Twelve hundred feet of 12-inch and 675 feet of 6-inch terra cotta pipe was laid for the purpose of putting the trunk line of the irrigation system under ground, thereby greatly conserving the water. The city water system was extended by laying 568 feet of 4-inch main south to the stock barns and installing a hydrant opposite same. The system supplying the various buildings was changed by connecting same with the new pipe, giving an ample supply of water to the toilets, which, together with the seven new permanent cesspools that were also constructed, makes the grounds and buildings most sanitary. This is an improvement that was badly needed. New drinking fountains were also installed upon the grounds.

Three thousand five (3,005) feet of wood and wire fencing was built during the current year. Of this amount 405 feet was built of new material; while the remainder was reconstruction. With the exception of a small portion of fencing which will receive attention before the next fair, the grounds are now enclosed in good shape. New wire gates were also installed at the entrances.

Preliminary steps have been taken whereby the land may be made more productive, and thereby add to the fair's resources. As stated above, the irrigation water from one of the systems is now conveyed to the grounds in

an underground trunk line of 12-inch terra cotta pipe, the supplying of which, in connection with the water supplied by another irrigation company, is now ample to irrigate all of the grounds. The planting of the center field and camp grounds to some kind of a hay crop is contemplated, and a survey preparatory to supplying water to these, as well as other parts of the grounds, has already been made.

Lack of space forbids a detailed statement of the work accomplished in the several departments. However, the Children's Industrial Department should receive more than passing notice, for in this department rests to a great extent the future of the fair. The children who exhibit today will be the adult exhibitors of tomorrow, and the progress of the fair, educationally, will be governed largely by the encouragement given them in exhibiting along the lines of horticultural, agricultural, livestock, and textile pursuits. Having this thought in mind, the management is lending every encouragement possible, in keeping with the resources at hand, with the result that the interest has become so statewide that 95 children, together with their chaperons, representing 26 counties, a goodly part of them bringing their exhibits, and all of them demonstrating in the projects in which they excelled, were entertained for three days during the fair. Two large tents with cots were provided for sleeping accommodations, and the meals were served in a community dining hall under the supervision of Miss Della L. Prell, director of home economics, Washington State College. The dining room, under Miss Prell's management, was conducted to perfection. Meals were not only furnished the children, chaperons and officers directly in charge of this department, but also the fifty naval training band boys were given two meals a day for the six days of the fair. In all 1,800 meals were furnished during the week, at an expense of a fraction less than 26 cents per meal, and the fact that there was no adverse criticism is satisfactory proof that they were ample. Entertainment in the way of lectures, demonstrations, moving pictures of educational subjects, and games were provided. Mrs. Elizabeth Diets Jones, state club leader, and Miss Josephine Arnquist, assistant state club leader, ably supervised the camp, and to them and their assistants is due its success.

Notwithstanding the rapid strides the fair has made during the past few years, there is much yet to be done, especially in the way of providing suitable exhibit buildings. The poultry building is old and entirely inadequate for the purpose. The woman's building is sorely taxed, while the children's department has to be housed in a portion of the dilapidated machinery building. A new building should be provided which would take care of these two departments. The old machinery building should be demolished and a new dairy and dairy machinery building erected in its place. Until such a time as a suitable building is provided we cannot hope to have a satisfactory exhibit of dairy products—one of the greatest industries of the state. The dairy department now occupies a makeshift of a building, without any refrigeration, so wholly lacking in facilities for the purpose for which it is used and so uninviting that instead of what would otherwise be one of the largest departments from an exhibition standpoint is now the least. Premiums should also be increased and new classes added. This is particularly so in the livestock department, as well as dairy, agricultural and horticultural departments. Lack of appropriation prohibits offerings for breeds of livestock which should re-

ceive recognition of full classification in the premium list. A separate offering for poultry, as well as pet stock, should also be added in the children's industrial department.

Let us hope that the 1919 legislature will make ample appropriation for continuing the work of upbuilding the fair, so nicely begun, to the end that the various departments may be strengthened by additional premium offerings and necessary buildings erected for the accommodation of exhibits which will surely follow.

Respectfully submitted,

FRANK MEREDITH,

Secretary-Manager.

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ELEVENTH ANNUAL REPORT

OF THE

State Bank Examiner

OF THE

STATE OF WASHINGTON



DECEMBER 31, 1907

BY

W. E. B. BROWN

State Bank Examiner

THE STATE OF WASHINGTON
DEPARTMENT OF COMMERCE
OAK STREET, SEATTLE, WASH.

ROSTER OF THE BANKING DEPARTMENT.

W. E. HANSON, <i>State Bank Examiner</i>	Seattle
LOUIS H. MOORE, <i>Deputy State Bank Examiner</i>	Seattle
F. I. GELL, <i>Deputy State Bank Examiner</i>	Olympia
CLAUDE P. HAY, <i>Deputy State Bank Examiner</i>	Sultan
R. B. MOTHERWELL, <i>Deputy State Bank Examiner</i>	Aberdeen
NORA E. HARRY, <i>Secretary</i>	Olympia
MARY M. KELLER, <i>Assistant</i>	Olympia

STATE BANKING DEPARTMENT.

STATE OF WASHINGTON.

OLYMPIA, WASH., December 31, 1917.

Honorable Ernest Lister, Governor of the State of Washington, Olympia:

SIR: In accordance with section thirteen (13), chapter eighty (80), of the Session Laws of the State of Washington for 1917, I have the honor to submit herewith the eleventh annual report of this department, which exhibits the condition of two hundred seventy-six (276) state banks and trust companies and nine (9) trust companies not acting in a banking capacity, operating in this state at the close of business at date of last call, November 20, 1917.

ELEVENTH ANNUAL REPORT OF THE STATE BANK EXAMINER

During the year 1917, five reports were asked for and made to this department, on the same dates on which reports were made by the national banks to the Comptroller of the Currency, to-wit: March 5, May 1, June 20, September 11 and November 20.

During the year, five state banks were organized and authorized to do business by this department. There were four failures and one consolidation, one bank liquidated and one nationalized.

Three hundred twenty-seven (327) regular examinations were made, according to law, of state banks and their branches, and trust companies, including those that are doing a banking business as well as those doing exclusively a trust business. For these services, fees were collected amounting to \$19,117.63. The fee is \$25 for each examination and 1/150 per cent. of the deposits at the date of examination.

Deposits of state institutions have increased \$15,037,999.80 since the last report of 1916, as shown by the comparative statement of condition contained in this report.

The legislature of 1917 passed a new bank and trust company act and a guaranty of deposits act. Both are conceded to be as good as those of other states. They are both workable and were passed only after having been thoroughly worked out by the best authorities along this line, in the state.

The bank act has made it possible to raise the standard of banking to a marked degree. The bank examiner is given authority in this act which will, to a great extent, eliminate the incompetent and dishonest banker.

An amendment was passed to the mutual savings bank act passed in 1915, which enables savings and loan associations to convert to mutual savings banks. Only one association has converted under this provision, being the Washington Savings & Loan Association of Seattle, which, on September 12th, 1917, became the Washington Mutual Savings Bank of Seattle. On this date, their deposits amounted to \$6,429,606.95.

The new bank act provides for one or more deputy state bank examiners, the number being governed by the appropriation of the department. Sufficient was appropriated to enable the department to employ two additional deputy state bank examiners. Mr. R. B. Motherwell, of Aberdeen, was appointed a deputy on April 9, 1917. Mr. E. P. Hoffman, of North Yakima, was appointed a deputy on May 1, 1917. Mr. Hoffman resigned the position on December 1, 1917.

Mr. C. S. Moody resigned as deputy state bank examiner on March 1, 1917, and was appointed special deputy state bank examiner to assist in the liquidation of the German-American Mercantile Bank of Seattle.

Mr. F. I. Gill, formerly a deputy in this department, was re-appointed on July 1, 1917.

The Guaranty Act has brought the banking fraternity to realize that the depositing public is as much entitled to have its funds protected and insured

as the government, state, county and municipality, whose deposits have been protected by laws providing that all public funds deposited in banks must be secured.

The act is administered by a board of five members. The Governor, ex-officio, is chairman, the State Bank Examiner, ex-officio, is secretary and executive officer. The other three members of the board, appointed and commissioned by the Governor, on June 16, 1917, are

R. L. Rutter, president of the Spokane & Eastern Trust Company of Spokane;

J. P. Duke, cashier of the Security State Bank of Palouse;

J. E. Chilberg, president of the Scandinavian American Bank of Seattle;

whose terms expire one, two and three years, respectively, from January 1, 1919.

The board has held seven meetings since its organization.

The provisions of the act are such that a solvent bank, under the banking and bankruptcy laws may not be eligible, as it must have other qualifications, such as an unimpaired surplus fund of at least 10% of its capital. Its past record as to business and management, as well as its prospects for the future along the same lines, must be unquestionably good. There must be no question as to the solvency of its assets. It must undergo the most rigid examination by the banking department, after which it is passed upon by the Guaranty Fund Board. The act is not compulsory but voluntary as to membership.

This feature already has had a great tendency to eliminate the incompetent and dishonest banker. The passage of this act has had a most wholesome effect on banking, generally, in the state.

Fifty-four (54) banks and four (4) branch banks have been passed upon by the Guaranty Board. Forty-six (46) banks and three (3) branches have qualified and have been admitted to membership.

The total capital stock of the banks having	
qualified is	\$3,445,000 00
Amount of bonds deposited as security is....	294,050 00
Amount of cash deposit to credit of Guaranty	
Fund Board is.....	139,043 20

being 1% and $\frac{1}{2}$ of 1%, respectively, of eligible deposits subject to guaranty, as averaged for the preceding year, or the year 1916. The amount of eligible deposits that are guaranteed, as shown by the report of guaranteed banks for November 20, 1917, is \$37,379,437.04.

A number of applications for membership are in the hands of the Guaranty Board and will be acted upon at its next meeting. Guaranteed banks are designated by (*) in the list of banks shown in this report.

The First International Bank of South Bend was closed on the 19th day of July, 1915, and has, since that date, been under liquidation by this department, Mr. R. A. Langley being appointed special deputy state bank examiner in charge.

On account of the large amount of the best assets being hypothecated and pledged to secure preferred depositors, the liquidation has been unusually slow. The other assets consist principally of real estate equities for which there has been no sale.

There has been collected and was on December 1, 1917, on deposit in cash the amount of \$17,653.82; about \$10,000 of this amount is tied up on account of litigation. There can be no dividend declared until the litigation has been disposed of and a market found for the real property.

The affairs of the bank are in a very tangled condition and the assets have been depreciating since the bank was closed. The expense in connection with the liquidation has been greatly reduced and is, at this time, a very small item.

The Cowlitz County Bank of Kalama was closed and taken charge of by this department on January 4, 1916, Mr. R. A. Langley being appointed special deputy state bank examiner in charge.

Dividends amounting to 25% were paid to depositors and creditors during the year 1916. A 10% dividend has since been paid, making a total dividend of 35%.

The liquidation of this bank has been practically completed. The remaining assets have been reduced so that it is possible at this time to make an estimate of further dividends that will be paid to depositors and creditors, when the assets have been disposed of and collected; it is expected that a further dividend will be paid amounting to approximately 35%. The cost of liquidation in connection with this bank has been reduced to such an extent that the earnings from the remaining assets will no doubt pay all costs of further liquidation.

The Broadway State Bank of Seattle was closed and taken charge of by this department on January 18, 1917, Mr. R. A. Langley being appointed special deputy state bank examiner to assist in the liquidation.

At the time the bank was closed, it had cash on hand amounting to \$1,931.87 and other purported assets, according to its books, amounting to \$211,948.83. Claims have been filed in the amount of \$164,547.38, as follows:

Allowed as general or common.....	\$161,898 49
Rejected	953 57
Allowed as preferred and paid.....	132 00
Filed but not adjusted.....	1,563 32

A dividend of 15% has been paid to depositors and creditors.

The assets of this institution were found to be in very poor condition, a large amount of same were hypothecated and pledged to preferred creditors. The liquidation of this bank will be very slow, on account of the tangled condition of its affairs.

The Northern Bank & Trust Company of Seattle was closed and taken charge of by the banking department on January 29, 1917. Mr. J. H. Edwards was appointed special deputy state bank examiner to assist in the liquidation.

On the date the bank was closed, there was cash on hand amounting to \$13,867.24 and other purported assets, according to the books, amounting to \$1,755,958.49.

Claims have been filed in the amount of \$1,735,422.27, as follows:

Allowed as common.....	\$1,567,495 24
Allowed as preferred.....	25,307 30
Allowed as contingent.....	6,000 00
Rejected	136,619 73

The amount of the purported assets has been found to be incorrect. A trust company business was transacted of which practically no record was kept. Its officers gave guarantees with assets that were sold, of which no record was kept.

The president of the bank admitted defalcations and embezzlements of its funds to an amount exceeding \$60,000.00; also admitted falsification of its records. He was charged with these offenses, pleaded guilty thereto and was sentenced to a long term in the state penitentiary.

Besides the loss to the bank through his defalcations, various customers suffered losses through worthless paper sold to them, some of which was guaranteed.

Because of the above mentioned irregularities, liquidation has necessarily been slow and slightly more expensive than would have otherwise been the case. Many suits have been instituted against the department and a number of them are still pending.

The income to December 1st was \$17,288.00. This does not include attorneys' fees allowed and other items of income that will not be credited until they are actually paid. The amount thus earned, but not credited, amounts to over \$4,000.00.

The cost of liquidation to December 1st was \$26,400.59. This expense is less than anticipated, as there has been an unusual amount of litigation and investigation on account of the tangled, irregular and false condition of its affairs generally.

The largest individual asset of the bank was the property commonly known and designated as the Issaquah coal mines, situated near the town of Issaquah, in King county.

At the time the bank was taken possession of by the department, for liquidation, it held the larger portion of this property under mortgage foreclosure proceedings, having invested therein up to that time, \$113,785.78.

The rest of the property, consisting of two large tracts, was separately owned. Prior to its insolvency, the bank had made repeated efforts to consolidate the ownership of the properties by the purchase of these tracts, but without avail.

Realizing the necessity of acquiring title to all of these properties before attempting an advantageous sale of the bank's interest, the department immediately purchased these two tracts with funds realized from other assets of the bank, at a cost of \$39,767.65.

There was subsequently expended by the department the sum of \$14,392.34 in perfecting title to, removing prior liens therefrom and in preserving the entire property.

After the declaration of war between the United States and Germany, the mines were sold to the Pacific Coast Coal Company for the sum of \$300,000. From the property originally owned by the bank \$160,000 was realized and \$140,000 from the other tracts purchased by the department. This sale will represent a profit to the depositors and creditors of the bank of about \$120,000, if pending or threatened litigation over the proceeds is decided favorably to the department.

The Fremont State Bank of Seattle was closed and taken charge of by the banking department on January 31, 1917, Mr. R. A. Langley being appointed special deputy state bank examiner. At the time the bank was

closed, they had cash on hand amounting to \$3,235.15, and other purported assets, according to the books, amounting to \$213,616.06. Claims have been filed in the amount of \$160,073.30, as follows:

Allowed as general or common.....	\$181,354 80
Rejected in full.....	918 65
Allowed as preferred and paid.....	672 59
Cancelled and surrendered.....	702 20
Filed but not adjusted.....	3,778 40
Secured claims paid by sale of collateral.....	22,646 66

To clear the assets of this bank, which consist principally of real estate, equities and mortgages, it has been necessary to expend \$9,650.89 which includes the payment of interest, taxes, assessments, and purchasing first mortgages to protect liens of the bank on real property.

On account of the tangled condition of its affairs generally, it has been necessary to do an unusual amount of work, both legal and otherwise, to preserve its assets.

Expenses of the bank for the period ending December 1st have been \$4,497.71. During this same period, earnings have been collected amounting to \$2,280.74. Sufficient funds have not been collected to pay a dividend and retain sufficient on hand to further protect the assets of the bank.

The German-American Mercantile Bank of Seattle was closed and taken charge of by this department on January 31, 1917. Mr. C. S. Moody was appointed special deputy state bank examiner to assist in the liquidation.

At the time the bank was closed, it had cash on hand amounting to \$6,207.90 and other purported assets, according to its books, amounting to \$1,560,081.80. Claims have been filed in the amount of \$1,135,859.07, as follows:

Allowed as general or common.....	\$1,109,348 14
Rejected	26,027 48
Allowed as preferred and paid.....	483 45

Sufficient funds have been realized from the assets to pay dividends to depositors and creditors amounting to 35%. A sufficient amount of funds has been retained to preserve and protect the remaining assets. Considerable of the assets are, at this time, in litigation; others are being collected and reduced to judgments.

The liquidation of the affairs has not been determined to such an extent that any definite estimate can be made as to the positive amount of further dividends that will be paid. The examiner feels, however, that if the department is successful in a majority of its cases now pending in court, there should be sufficient realized out of the remaining assets to pay further dividends amounting to approximately 35%.

During the ten months of liquidation ending December 1st, the costs incurred and paid amount to \$20,763.16. Disbursements necessarily made to preserve the assets in the payment of taxes, assessments, interest and the purchasing of first mortgages to protect the liens of the bank, amount to \$9,906.81. During this same period, there has been collected as earnings the sum of \$29,653.78. This is \$8,890.62 in earnings over and above the expense of liquidation.

Respectfully submitted,

W. E. HANSON,
State Bank Examiner.

EXPENSES AND RECEIPTS.

Expenses from January 1, 1917, to December 31, 1917, inclusive, consist of the following:

Salaries	\$16,692 01
Traveling, office and other expenses.....	9,550 06

Total expenses of department..... \$26,242 07

Receipts of the department from January 1, 1917, to December 31, 1917, inclusive, are as follows:

Fees for examinations.....	\$19,117 63
Miscellaneous receipts, filing reports, fines assessed, etc.	1,365 23

Total receipts of department..... \$20,482 86

(For practically two months after the four Seattle bank failures, the deputies, on account of special work in connection with same, were unable to make regular examinations for which fees could be collected.)

Detailed statement of money received:

EXAMINATION FEES.

<i>Received from</i>	<i>Amount.</i>
Bank of Oroville, Oroville.....	\$25 10
Union Title & Trust Company, Oroville.....	25 00
Central Bank & Trust Company, North Yakima.....	57 45
State Bank of Conway, Conway.....	28 10
State Bank of Battleground, Battleground.....	26 90
Canadian Bank of Commerce, Seattle.....	200 00
State Bank of Charleston, Charleston.....	26 85
Guardian Trust & Savings Bank, Seattle.....	52 50
Fidelity Trust Company, Tacoma.....	225 00
First Bank of Anatone, Anatone.....	28 10
Southwestern Washington Bank, Ilwaco.....	30 10
Liberty Bay Bank, Poulsbo.....	32 80
State Bank of Black Diamond, Black Diamond.....	28 95
Japanese Commercial Bank, Seattle.....	49 25
Pacific State Bank, South Bend.....	60 40
Commercial Bank of Conconully (Okanogan Branch).....	32 05
Peoples Savings Bank, Seattle.....	151 50
Metropolitan Bank, Seattle.....	131 40
Union Savings & Trust Company, Seattle.....	225 00
Union Savings & Trust Co., Seattle (Georgetown Branch)....	42 50
Union Savings & Trust Co., Seattle (Ballard Branch).....	52 45
Grant County Bank, Ephrata.....	20
Port Angeles Trust & Savings Bank, Port Angeles.....	34 10
Bank of Chewelah, Chewelah.....	30 65
North Pacific Bank, South Tacoma.....	20
Oriental American Bank, Seattle.....	34 30
Union Park Bank, Spokane.....	31 00
Home State Bank, Blaine.....	31 30
Hamilton State Bank, Hamilton.....	29 05
State Bank of Concrete, Concrete.....	30 15
Bank of Commerce, Anacortes.....	42 90
First State Bank, Clear Lake.....	28 20
Citizens Bank of Renton, Renton.....	44 50
Columbia State Bank, White Salmon.....	38 35
State Bank of Goldendale, Goldendale.....	47 30
Bank of Bickleton, Bickleton.....	41 40
State Bank of Lyle, Lyle.....	28 40
Washington Exchange Bank, Vancouver.....	42 50
Clarke County Bank, Washougal.....	33 10

<i>Received from</i>	<i>Amount.</i>
Bank of Stevenson, Stevenson.....	\$34 25
Kelso State Bank, Kelso.....	46 76
Montesano State Bank, Montesano.....	60 47
Bank of Elma, Elma.....	39 96
Field & Lease, Bankers, Centralia.....	41 00
Security State Bank, Chehalis.....	46 40
Willapa Harbor State Bank, Raymond.....	57 96
Napavine State Bank, Napavine.....	28 08
North Pacific Bank, Tacoma.....	40 60
Lumberman's Bank, Hoquiam.....	58 05
Oriental American Bank, Seattle.....	39 10
State Bank of Morton, Morton.....	28 60
Greenlake State Bank, Seattle.....	34 95
Title Trust Company, Seattle.....	25 00
Scandinavian American Bank, Seattle.....	836 85
Scandinavian American Bank, Seattle (Ballard Branch).....	69 15
Commercial Bank, Twisp.....	34 80
Quincy Valley State Bank, Quincy.....	32 15
Community State Bank, Valleyford.....	26 75
Leavenworth State Bank, Leavenworth.....	43 50
Farmers State Bank, Winthrop.....	28 60
Farmers & Mechanics Bank, Spokane.....	46 10
Miners & Merchants Bank, Chelan.....	42 85
Commercial Bank & Trust Company, Wenatchee.....	56 55
Commercial State Bank, Mansfield.....	32 35
Methow Valley Bank, Pateros.....	27 55
Lincoln County State Bank, Davenport.....	61 05
American Security Bank, Kennewick.....	28 20
Bank of Colville, Kettle Falls.....	32 30
Farmers Savings Bank, Walla Walla.....	106 75
State Bank of Connell, Connell.....	40 95
Bank of Pasco, Pasco.....	39 55
Walla Walla Safety Deposit & Trust Co., Walla Walla.....	25 00
Peoples State Bank, Walla Walla.....	101 65
Orient State Bank, Orient.....	27 85
Ferry County State Bank, Republic.....	39 00
Citizens State Bank, Puyallup.....	50 55
Farmers State Bank of Krupp, Krupp.....	33 25
Ruff State Bank, Ruff.....	33 05
Washington Trust Company, Spokane.....	110 15
Seattle Trust Company, Seattle.....	25 00
Hunters Exchange Office, Hunters.....	31 85
Kalama State Bank, Kalama.....	30 85
Farmers State Bank, Hatton.....	32 30
Woodland State Bank, Woodland.....	34 30
Othello State Bank, Othello.....	30 65
Wahkiakum County Bank, Cathlamet.....	33 20
Ferndale State Bank, Ferndale.....	38 85
Nooksack Valley State Bank, Everson.....	31 35
First State Bank, Yacolt.....	31 20
Coffman, Dobson & Co., Chehalis.....	116 20
Redmond State Bank, Redmond.....	33 20
Toledo State Bank, Toledo.....	31 60
Farmers State Bank, Lind.....	27 15
State Bank of Winlock, Winlock.....	32 60
Bank of Sprague, Sprague.....	79 10
German-American State Bank, Ritzville.....	60 20
Farmers & Merchants State Bank, Malden.....	35 80
Security State Bank, LaCrosse.....	31 55
Exchange Bank, Watsburg.....	40 80
First State Bank, Prescott.....	33 55
Farmers State Bank, St. John.....	32 35

<i>Received from</i>	<i>Amount.</i>
Bank of Starbuck, Starbuck.....	\$80 40
Tekoa State Bank, Tekoa.....	47 25
Pomeroy State Bank, Pomeroy.....	99 80
First State Bank, Garfield.....	44 70
Farmers Bank of Ellensburg.....	77 55
Step toe State Bank, Step toe.....	27 65
Security State Bank, Richland.....	80 80
First Bank of White Bluffs, White Bluffs.....	29 15
Colfax State Bank, Colfax.....	38 75
Lincoln Trust Company, Spokane.....	43 67
Peoples State Bank, Enumclaw.....	39 25
Roy State Bank, Roy.....	31 20
Security State Bank, Palouse.....	54 80
State Bank of Enumclaw, Enumclaw.....	41 40
Farmers State Bank, Johnson.....	28 80
Colton State Bank, Colton.....	45 25
Farmers State Bank, Uniontown.....	41 15
Security State Bank, Valley.....	26 20
Citizens Bank, Anacortes.....	42 65
First Bank of Wilkeson, Wilkeson.....	37 45
Traders Bank, Toppenish.....	43 05
San Juan County Bank, Friday Harbor.....	47 85
Selah State Bank, Selah.....	32 55
Langley State Bank, Langley.....	28 00
Prosser State Bank, Prosser.....	49 15
North Side State Bank, Seattle.....	27 53
Rainier State Bank, Seattle.....	35 65
State Bank of Kent, Kent.....	41 85
White Swan Bank, White Swan.....	25 95
Issaquah State Bank, Issaquah.....	33 15
Cle Elum State Bank, Cle Elum.....	65 25
Cle Elum State Bank, Cle Elum (Roslyn Branch).....	47 55
Kittitas State Bank, Kittitas.....	28 25
Spokane State Bank, Spokane.....	41 60
Yakima Valley Bank, North Yakima.....	76 05
Yakima Trust Company, North Yakima.....	64 95
Central Bank & Trust Company, North Yakima.....	35 25
Bothell State Bank, Bothell.....	30 15
Specie Bank, Seattle.....	38 80
Bank of Latah, Latah.....	32 80
Bank of Ellensburg, Ellensburg.....	47 25
King County State Bank, Seattle.....	32 80
Pullman State Bank, Pullman.....	57 80
Clark Bros. & Klein Trust Company, Spokane.....	25 00
Union Trust Company, Spokane.....	40 85
First Savings & Trust Company, Colfax.....	44 80
First State Bank, Yacolt.....	31 45
Kalama State Bank, Kalama.....	30 45
State Bank of Spangle, Spangle.....	34 45
Kitsap County Bank, Port Orchard.....	34 55
Citizens Bank of Sultan, Sultan.....	30 85
First State Bank, LaCrosse.....	57 05
State Bank of Charleston, Charleston.....	27 95
Field & Lease, Bankers, Centralia.....	44 25
Almira State Bank, Almira.....	59 05
Bank for Savings, Seattle.....	71 25
Albion State Bank, Albion.....	29 55
Ferry County State Bank, Republic.....	37 20
Farmers State Bank, Almira.....	43 35
Farmers Bank of Krupp, Krupp.....	32 40
Bremerton Trust & Savings Bank, Bremerton.....	39 85
Northwestern State Bank, South Bellingham.....	105 35

<i>Received from</i>	<i>Amount.</i>
Lynden State Bank, Lynden.....	\$50 20
Moxee State Bank, Moxee City.....	27 65
Lyman State Bank, Lyman.....	31 95
Garrison Bros. State Bank, Sumas.....	35 45
C. E. Bingham & Co., Sedro Woolley.....	70 65
Miners & Merchants Bank, Chelan.....	43 60
Molson State Bank, Molson.....	38 20
Washington Savings & Loan Association, Seattle.....	426 65
Commercial Bank, Okanogan.....	36 75
Commercial Bank, Conconully.....	29 35
Washington Exchange Bank, Vancouver.....	44 35
Ruff State Bank, Ruff.....	32 75
Commercial State Bank, Chesaw.....	27 45
University State Bank, Seattle.....	71 15
Clarke County Bank, Washougal.....	32 40
Citizens State Bank, Prosser.....	43 35\
Citizens Bank & Trust Company, Everett.....	66 40
Colville Loan & Trust Company, Colville.....	36 00
Miners & Smelters Bank, Northport.....	62 75
Security State Bank, Spokane.....	43 65
Commercial Bank, Snohomish.....	37 75
Citizens Bank, Bremerton.....	43 75
Eltopia State Bank, Eltopia.....	28 85
Wall Street Bank, Spokane.....	29 75
Woodland State Bank, Woodland.....	34 60
LaCenter State Bank, LaCenter.....	30 15
Washington Safe Deposit & Trust Company, Spokane.....	25 00
Spokane & Eastern Trust Company, Spokane.....	674 80
Kirkland State Bank, Kirkland.....	30 85
Ridgefield State Bank, Ridgefield.....	30 80
Citizens State Bank, Auburn.....	32 65
Scandinavian American Bank, Spokane.....	86 15
Bankers Trust Company, Tacoma.....	56 25
Grant County Bank, Ephrata.....	37 75
Commercial Bank & Trust Company, Wenatchee.....	55 60
Wilson Creek State Bank, Wilson Creek.....	32 15
Wheeler State Bank, Wheeler.....	29 85
State Bank of Seattle, Seattle.....	169 75
Skagit County Savings Bank & Trust Co., Mount Vernon....	38 05
State Bank of Edmonds, Edmonds.....	34 95
LaConner State Bank, LaConner.....	37 15
Douglas County Bank, Waterville.....	73 80
American Savings Bank & Trust Company, Seattle.....	181 65
Western Trust Company, Seattle.....	25 00
State Bank of Bellevue, Bellevue.....	26 45
Waterville Savings Bank, Waterville.....	46 80
Mansfield State Bank, Mansfield.....	40 35
Union Park Bank, Spokane.....	37 00
Citizens Bank, Tenino.....	30 15
Coulee State Bank, Coulee City.....	37 65
Hartline State Bank, Hartline.....	37 25
Guardian Trust & Savings Bank, Seattle.....	48 05
Farmers & Merchants Bank, Edison.....	31 25
Farmers State Bank, Sprague.....	32 45
Marysville State Bank, Marysville.....	40 85
Withrow State Bank, Withrow.....	40 35
Bank of Commerce, Everett (Pine St. Branch).....	36 75
Bank of Commerce, Everett.....	83 75
State Bank of North Bend, North Bend.....	31 25
Central Bank of Toppenish, Toppenish.....	40 95
Hillyard State Bank, Hillyard.....	52 75
Bank of Rosalia, Rosalia.....	42 55

<i>Received from</i>	<i>Amount.</i>
Tacoma Savings Bank & Trust Company, Tacoma.....	\$98 00
Scandinavian American Bank, Seattle.....	883 60
Citizens State Bank, Tekoa.....	47 20
Bank of Commerce, Everett (Coupeville Branch).....	33 95
Elberton State Bank, Elberton.....	29 15
Scandinavian American Bank, Seattle (Ballard Branch).....	84 25
Mabton Bank, Mabton.....	38 75
State Bank of Conway, Conway.....	31 25
Farmers & Lumbermen's Bank, Elma.....	37 65
Centralia State Bank, Centralia.....	49 40
Hayes & Hayes, Bankers, Aberdeen.....	244 00
Aberdeen State Bank, Aberdeen.....	40 00
Naches State Bank, Naches.....	29 95
Farmers & Merchants Bank, Centralia.....	70 20
Bank of Stanwood, Stanwood.....	55 60
State Bank of East Stanwood, East Stanwood.....	37 75
Bank of Farmington, Farmington.....	39 25
Bank of Fairfield, Fairfield.....	51 45
Farmers & Merchants Bank, Rockford.....	41 20
Waverly Exchange Bank, Waverly.....	36 95
Oakville State Bank, Oakville.....	29 55
Duvall State Bank, Duvall.....	31 25
Tolt State Bank, Tolt.....	29 95
State Bank of Wilbur, Wilbur.....	74 25
Farmers & Merchants Bank, Cashmere.....	42 80
Cashmere State Bank, Cashmere.....	34 60
Farmers State Bank, Reardan.....	60 80
Creston State Bank, Creston.....	45 95
Comegys, Hanford & Miller Bank, Thornton.....	38 95
Union State Bank, Odessa.....	74 45
West Seattle State Bank, Seattle.....	30 47
Harrington State Bank, Harrington.....	45 75
Farmers & Merchants Bank, Odessa.....	40 05
Lamont State Bank, Lamont.....	41 85
Dexter Horton Trust & Savings Bank, Seattle.....	509 50
Warden State Bank, Warden.....	32 40
Puget Sound Bank & Trust Company, Tacoma.....	122 75
Bank of Endicott, Endicott.....	46 75
Bremerton Trust & Savings Bank, Bremerton.....	42 80
Orting State Bank, Orting.....	32 05
Puyallup State Bank, Puyallup.....	55 00
Eatonville State Bank, Eatonville.....	30 95
Commercial State Bank, Oakesdale.....	55 95
Pe Ell State Bank, Pe Ell.....	26 95
Everett Trust & Savings Bank, Everett.....	58 25
Oak Harbor State Bank, Oak Harbor.....	32 85
Rucker Bank, Lake Stevens.....	29 45
Seaboard Bank, Seattle.....	61 05
Granite Falls State Bank, Granite Falls.....	30 60
Bank of Clallam County, Port Angeles.....	54 40
Northwest Trust & Savings Bank, Seattle.....	144 00
Merchants Bank of Port Townsend, Port Townsend.....	68 00
State Bank of Sequim, Sequim.....	32 25
Central Bank & Trust Company, North Yakima.....	41 25
State Bank of Buckley, Buckley.....	40 75
State Bank of Shelton, Shelton.....	54 60
Langley State Bank, Langley.....	27 80
First Bank of Wilkeson, Wilkeson.....	39 00
Farmers State Bank, Connell.....	35 65
Farmers State Bank, Kahlotus.....	28 45
Home State Bank, Blaine.....	48 80
Custer State Bank, Custer.....	29 55

<i>Received from</i>	<i>Amount.</i>
Okanogan State Bank, Riverside.....	\$33 65
Union Bank, Granger.....	31 00
Bank of Winona, Winona.....	39 15
Omak State Bank, Omak.....	35 25
Okanogan State Bank, Riverside (Loomis Branch).....	29 35
Bank of Oroville, Oroville.....	28 05
Knettle State Bank, Pomeroy.....	68 00
Bridgeport State Bank, Bridgeport.....	33 65
Union Title & Trust Company, Oroville.....	25 00
Outlook State Bank, Outlook.....	29 55
Sunnyside Bank, Sunnyside.....	49 55
Grandview State Bank, Grandview.....	41 25
State Bank of Clarkston, Clarkston.....	33 75
Baumeister, Vollmer & Scott Bank, Asotin.....	40 25
Bank of Asotin County, Asotin.....	43 60
Colville Loan & Trust Company, Colville.....	37 85
Entiat State Bank, Entiat.....	28 95
St John State Bank, St. John.....	54 55
Metropolitan Bank, Seattle.....	208 00
Brooks & Co. Bank, Goldendale.....	43 45
Farmers State Bank, Centerville.....	33 15
Bank of Edwall, Edwall.....	37 45
LaCenter State Bank, LaCenter.....	30 40
Napavine State Bank, Napavine.....	28 65
First State Bank, Deer Park.....	37 45
Lincoln County State Bank, Davenport.....	57 05
Hunters Exchange office, Hunters (Branch of Lincoln County State Bank, Davenport).....	33 60
Security State Bank, Newport.....	47 05
Metaline Falls State & Savings Bank, Metaline Falls.....	30 75
Ione State Bank, Ione.....	34 35
Fidelity Trust Company, Tacoma.....	421 80
Columbia Valley Bank, Wehatchee.....	87 60
Arlington State Bank, Arlington.....	42 45
Touchet State Bank, Touchet.....	30 05
Scandinavian American Bank, Tacoma.....	230 55
Castle Rock Bank, Castle Rock.....	42 05
Citizens Bank of Georgetown, Seattle.....	34 20
First Bank of Anatone, Anatone.....	30 00
Farmers State Bank, Sumner.....	38 25
State Bank of Battleground, Battleground.....	28 70
Canadian Bank of Commerce, Seattle.....	323 86
Citizens State Bank, Arlington.....	47 00
	\$19,117 63

FINES ASSESSED.

<i>Received from</i>	<i>Amount.</i>
Farmers & Merchants State Bank, Malden.....	\$20 00
Farmers State Bank, Uniontown.....	10 00
Walla Walla Safety Deposit & Trust Co., Walla Walla.....	20 00
Kittitas State Bank, Kittitas.....	10 00
Comegys, Hanford & Miller Bank, Thornton.....	10 00
Commercial State Bank, Oakesdale.....	10 00
Central Bank & Trust Company, North Yakima.....	10 00
Security State Bank, Chehalis.....	20 00
Farmers Savings Bank, Walla Walla.....	10 00
Hartline State Bank, Hartline.....	10 00
Security State Bank, Valley.....	10 00
Title Trust Company, Seattle.....	10 00
Security State Bank, Chehalis.....	10 00
Fidelity Trust Company, Tacoma.....	10 00
Walla Walla Safety Deposit & Trust Co., Walla Walla.....	10 00
Scandinavian American Bank, Tacoma.....	10 00
	\$190 00

MISCELLANEOUS COLLECTIONS.

<i>Received from</i>	<i>Amount.</i>	
Filing semi-annual report.....	\$10 00	
Filing articles of incorporation and amendments.....	210 00	
Issuing certificates of authority and increase of capital stock.	140 00	
J. A. Pardon, George, Iowa (Postage for mailing reports)....	25	
Northern Pacific Ry. Co. (Refund for mileage on account of baggage)	30	
Fremont State Bank, Seattle (Refund for mileage, account C. P. Hay, deputy bank examiner).....	14 68	
Fremont State Bank, Seattle (Salary of C. P. Hay, deputy bank examiner, for February).....	200 00	
Northern Bank & Trust Company, Seattle (Salary for L. H. Moore, deputy bank examiner, for February and half of March)	300 00	
German-American Mercantile Bank, Seattle (Salary for C. S. Moody, deputy bank examiner, for February).....	200 00	
Northern Bank & Trust Company, Seattle (Salary for last half of March of L. H. Moore, deputy bank examiner).....	100 00	\$1,175 23
Total receipts for the year.....		\$20,482 86

BANKS AUTHORIZED DURING THE YEAR 1917.

NAME OF BANK	Location	Capital Stock
Farmers State Bank.....	Lind.....	\$25,000 00
Security State Bank.....	Valley.....	15,000 00
Farmers State Bank.....	Kahlotus.....	15,000 00
Tonasket State Bank.....	Tonasket.....	30,000 00
American Commercial Bank.....	Wapato.....	25,000 00

INCREASE OF CAPITAL STOCK.

NAME OF BANK	Location	Increased From	To
Molson State Bank.....	Molson.....	\$15,000 00	\$25,000 00
State Bank of Wilbur.....	Wilbur.....	25,000 00	50,000 00
Scandinavian American Bank.....	Seattle.....	500,000 00	1,000,000 00
Coffman-Dobson Bank & Trust Company....	Chehalis.....	50,000 00	150,000 00
Peoples State Bank.....	Walla Walla.....	50,000 00	100,000 00
Grant County Bank.....	Ephrata.....	10,000 00	15,000 00
Farmers State Bank.....	Uniontown.....	10,000 00	20,000 00
Almira State Bank.....	Almira.....	25,000 00	50,000 00
North Side State Bank.....	Seattle.....	10,000 00	15,000 00
Seaboard Bank.....	Seattle.....	100,000 00	200,000 00
St. John State Bank.....	St. John.....	25,000 00	40,000 00

CONVERSION TO MUTUAL SAVINGS BANK.

Formerly	Now
Washington Savings & Loan Association of Seattle.	Washington Mutual Savings Bank of Seattle

BANKS CONSOLIDATED.

NAME OF BANK	Location	Consolidated With	Date
Bankers Trust Company,.....	Tacoma.....	Scandinavian American Bank, Tacoma.....	Nov. 17, 1917

DECREASE OF CAPITAL STOCK.

NAME OF BANK	Location	Decreased From	To
Union Trust & Savings Bank.....	Spokane.....	\$500,000 00	\$200,000 00

BANKS CLOSED.

NAME OF BANK	Location	Date
Broadway State Bank.....	Seattle.....	Jan. 18, 1917
Northern Bank & Trust Company.....	Seattle.....	Jan. 29, 1917
Fremont State Bank.....	Seattle.....	Jan. 31, 1917
German-American Mercantile Bank.....	Seattle.....	Jan. 31, 1917

BANKS LIQUIDATED.

NAME OF BANK	Location	Date
Bank of Kennewick.....	Kennewick.....	March 31, 1917

BANKS NATIONALIZED.

NAME OF BANK	Location	New Title	Date
Bank of Ellensburg.....	Ellensburg....	The National Bank of Ellensburg..	July 27, 1917

CHANGE OF TITLE.

From	To	Location
Union Trust & Savings Bank.....	Union Trust Company.....	Spokane
Northwest Trust & Safe Deposit Co.....	Northwest Trust & Savings Bank.....	Seattle
Coffman, Dobson & Co., Bankers.....	Coffman-Dobson Bank & Trust Company...	Oehalla

**STATE BANKS ADMITTED TO MEMBERSHIP IN FEDERAL RESERVE
SYSTEM IN 1917.**

Coffman-Dobson Bank & Trust Company, Chehalis.
Spokane & Eastern Trust Company, Spokane.
Bank of Rosalia, Rosalia.
First Savings & Trust Bank of Whitman County, Colfax.
Dexter-Horton Bank & Trust Company, Seattle.
Metropolitan Bank, Seattle.
First State Bank, LaCrosse.
State Bank of Wilbur, Wilbur.
Northwestern State Bank, South Bellingham.
Farmers State Bank, Reardan.
Lumberman's Bank, Hoquiam.
Fidelity Trust Company, Tacoma.

RESOURCES AND LIABILITIES.

Total Resources and Liabilities of 276 State Banks and 9 Trust Companies in the State of Washington, at Close of Business November 20th, 1917, Compared With Call of November 17th, 1916, Reported by 279 State Banks and 9 Trust Companies.

RESOURCES.

	Nov. 17, 1916.	Nov. 20, 1917.
Loans on real estate.....	\$14,107,624 05	\$16,003,403 95
Other loans and discounts.....	70,395,676 09	78,135,739 76
Overdrafts	312,746 08	164,952 80
Bonds and warrants.....	17,736,614 25	26,468,893 94
Stocks and other securities.....	3,250,464 30	3,737,500 30
Banking house	5,615,286 26	5,228,126 69
Furniture and fixtures.....	1,099,673 72	1,026,307 49
Other real estate owned.....	4,299,798 91	4,370,567 85
Due from banks—Approved reserve banks.....	32,184,443 14	27,203,057 90
Due from other banks.....	.....	1,691,839 51
Checks and cash items.....	549,589 80	706,671 62
Exchanges for clearing house.....	939,350 63	1,089,743 96
Cash on hand.....	6,886,158 32	7,558,599 91
Credited to Guaranty Fund.....	.....	252,158 26
Expenses	1,892,489 34	2,245,746 98
Other resources	335,534 68	1,643,525 69
Total resources	\$159,605,449 57	\$177,526,836 61

LIABILITIES.

Capital stock	\$15,847,700 00	\$15,656,700 00
Surplus	4,447,160 89	4,774,346 61
Undivided profits	4,424,645 44	4,840,412 32
Dividends unpaid	4,316 59	36,616 57
Due to banks.....	11,545,356 60	10,253,787 42
City, county and state deposits.....	2,764,090 35	9,855,916 41
Postal savings deposits.....	663,805 10	1,698,930 75
Deposits subject to check.....	58,362,532 41	63,303,649 76
Demand certificates	2,685,477 32	2,441,858 66
Cashiers' checks	924,662 36	1,363,442 03
Time certificates	11,811,303 49	15,652,750 34
Savings deposits	44,351,146 38	43,390,446 14
Certified checks	219,622 14	221,538 03
Trust funds	431,360 94	261,657 50
Letters of credit.....	92,179 63	275,856 04
Rediscounts	87,707 45	648,486 67
Bills payable	685,679 78	715,397 46
Other liabilities	256,702 70	2,135,043 90
Total liabilities	\$159,605,449 57	\$177,526,836 61
Gain in deposits since November 17, 1916.....	.....	\$15,037,999 80

(The above statement does not include deposits of the Washington Mutual Savings Bank of Seattle, which on November 20th, 1917, were \$6,562,202.57. Mutual savings banks are required to file a statement only semi-annually.)

DUE FROM BANKS.

	<i>Nov. 17, 1916.</i>	<i>Nov. 20, 1917.</i>
Due from national banks outside of the state.....	\$8,292,284 43	\$5,976,563 54
Due from national banks in the state.....	12,435,132 62	14,172,335 78
Total due from national banks.....	\$20,727,417 05	\$20,148,899 32
Due from state banks outside of the state.....	\$4,005,995 13	\$4,268,943 83
Due from state banks in the state.....	4,449,310 80	2,785,214 75
Total due from state banks.....	\$8,455,305 93	\$7,054,158 58
Due from sundry banks, including foreign countries	\$8,001,720 16	\$1,691,839 51
Total due from banks.....	\$32,184,443 14	\$28,894,897 41

CONDITION OF NATIONAL BANKS.

Combined Condition of Seventy-Eight (78) National Banks in the State of Washington at Close of Business November 20, 1917.

RESOURCES.

Cash and exchange.....	\$47,332,000 00
Loans and discounts.....	96,599,000 00
U. S. bonds and other bonds and securities.....	44,703,000 00
Customers liability account of "Acceptances" executed by banks...	1,015,000 00
Customers liability under letters of credit.....	1,484,000 00
Bank house and equipment.....	3,207,000 00
Other real estate.....	1,458,000 00
Other resources	598,000 00
Total resources	\$196,396,000 00

LIABILITIES.

Capital	\$11,810,000 00
Surplus	4,355,000 00
Undivided profits	3,018,000 00
Due to banks.....	23,448,000 00
Demand deposits	96,205,000 00
Time deposits	47,021,000 00
Money and bonds borrowed.....	1,005,000 00
Acceptances executed	1,009,000 00
Letters of credit and travelers' checks outstanding.....	1,856,000 00
Circulation	6,680,000 00
Total liabilities	\$196,396,000 00

COMPARATIVE ABSTRACT OF REPORTS OF CONDITION OF STATE BANKS IN WASHINGTON AT THE CLOSE OF BUSINESS ON THE DATES NAMED.

	March 6, 1917, 274 State Banks,	May 1, 1917, 274 State Banks, 9 Trust Companies	June 30, 1917, 275 State Banks, 9 Trust Companies	Sept. 11, 1917, 275 State Banks, 9 Trust Companies	Nov. 20, 1917, 276 State Banks, 9 Trust Companies
RESOURCES:					
Loans on real estate.....	\$13,302,922 22	\$14,373,415 69	\$14,088,459 74	\$14,388,374 08	\$16,008,408 95
Other loans and discounts.....	65,395,025 06	69,273,717 68	71,059,039 22	74,478,365 99	78,135,738 76
Overdrafts.....	238,549 75	234,179 78	335,059 13	236,597 46	164,922 80
Bonds and warrants.....	16,685,502 75	18,842,072 83	18,877,829 13	20,390,398 89	26,408,983 94
Stocks and other securities.....	1,175,249 63	1,930,827 55	3,653,250 97	3,620,688 10	5,737,100 30
Banking house.....	5,438,915 85	5,499,807 28	5,513,515 82	5,543,904 53	5,738,136 69
Furniture and fixtures.....	943,917 52	935,493 75	1,024,235 19	1,025,084 98	1,093,807 49
Other real estate owned.....	3,332,749 26	4,203,875 08	4,308,180 15	4,488,904 97	4,370,587 85
Due from banks.....	29,365,716 97	29,804,389 98	24,117,600 29	23,558,203 21	27,304,087 90
Due from other banks.....	412,689 56	497,307 29	1,393,384 83	1,783,302 41	1,460,839 51
Checks and cash items.....	1,127,627 34	921,083 88	499,303 69	1,339,242 86	705,671 62
Exchanges for clearing house.....	8,491,563 66	7,731,089 52	1,003,731 81	1,332,347 05	1,039,743 96
Cash on hand.....	694,261 41	1,302,206 12	7,613,942 82	7,673,469 11	232,158 26
Credited to Guaranty Fund.....	210,662 63	686,451 25	1,623,223 90	1,567,532 81	2,246,740 96
Expenses.....			715,873 86	1,176,888 41	1,643,525 69
Other resources.....					
Totals.....	\$147,222,173 88	\$156,387,149 64	\$157,302,483 92	\$162,896,008 81	\$177,593,886 61
LIABILITIES:					
Capital stock.....	\$13,432,700 00	\$15,191,700 00	\$15,256,700 00	\$15,856,300 00	\$15,686,700 00
Surplus.....	3,181,205 83	4,460,846 09	4,488,278 39	4,507,471 76	4,774,346 61
Undivided profits.....	2,621,210 84	3,440,663 16	3,925,238 77	3,602,176 22	4,840,412 82
Dividends unpaid.....	22,216 18	8,017 23	9,346 89	11,690 94	36,616 57
Due to banks.....	9,486,281 27	9,125,923 87	7,944,552 83	7,990,635 53	10,253,787 42
City, county and state deposits.....	2,660,102 40	10,461,306 54	14,511,290 32	10,884,884 37	9,865,916 41
Postal savings deposits.....	772,688 73	833,077 36	835,884 78	865,873 36	1,098,580 75
Deposits subject to check.....	54,336,159 29	51,758,729 11	49,316,700 83	54,650,295 78	63,308,049 76
Demand certificates.....	2,888,489 55	2,973,945 17	2,693,995 25	2,588,605 52	2,411,859 69
Cashiers' checks.....	1,147,176 21	972,885 60	1,141,462 87	1,176,084 56	1,363,442 08
Time certificates.....	13,473,716 44	13,793,805 01	13,591,099 23	14,157,745 69	15,632,750 24
Savings deposits.....	41,867,840 91	41,272,938 17	40,847,848 73	41,876,571 91	43,390,446 14
Certified checks.....	193,168 69	397,151 72	398,039 26	240,373 82	221,538 03
Trust funds.....	150,189 57	389,138 58	258,408 50	1,357,138 31	961,687 50
Letters of credit.....	136,883 19	209,439 85	198,069 56	346,977 50	275,856 04
Redeemable.....	79,142 44	42,220 78	420,856 00	564,248 04	648,488 87
Bills payable.....	960,616 12	798,438 86	623,853 92	1,167,118 20	713,397 46
Other liabilities.....	42,961 13	366,439 26	515,532 96	525,925 50	2,135,043 40
Totals.....	\$147,222,173 88	\$156,387,149 64	\$157,302,483 92	\$162,896,008 81	\$177,593,886 61

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 20, 1917.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Aberdeen.....	Grays Harbor	Aberdeen State Bank.....	1907	G. L. Nyere.....	G. W. Ripley.....	\$25,000	\$1,454	\$211,029	\$37,889
Aberdeen.....	Grays Harbor	Hayes & Hayes, Bankers.....	1904	F. B. Patterson.....	W. J. Patterson.....	300,000	88,868	3,351,480	660,117
Albion.....	Whitman	Albion State Bank.....	1908	W. E. Lawson.....	J. E. Miller.....	25,000	6,517	76,927	22,040
Almira.....	Lincoln	*Almira State Bank.....	1902	Jens Peterson.....	Julius C. Johnson..	50,000	17,125	534,801	135,003
Almira.....	Lincoln	*Farmers State Bank.....	1914	Fred H. Hyde.....	O. E. Allison.....	25,000	7,763	272,657	38,992
Anacortes.....	Skagit	Bank of Commerce.....	1905	Daniel Kelleher.....	Fred D. Cartwright	25,000	3,682	290,428	44,186
Anacortes.....	Skagit	Citizens State Bank.....	1907	M. B. Mattice.....	W. J. Mattice.....	25,000	6,795	259,178	157,866
Anatone.....	Asotin	First Bank of Anatone.....	1907	D. A. McIntosh.....	John K. McIntosh..	10,000	1,077	75,253	23,545
Arlington.....	Snohomish	Arlington State Bank.....	1900	C. E. Bingham.....	C. H. Tracy.....	25,000	11,164	277,265	156,741
Arlington.....	Snohomish	Citizens State Bank.....	1907	J. B. Riley.....	L. C. Palmer.....	15,000	17,483	317,021	68,064
Asotin.....	Asotin	Bank of Asotin County.....	1904	Ben Ayers.....	J. B. Jones.....	25,000	8,612	279,223	146,928
Asotin.....	Asotin	Baumelster, Vollner & Scott Bank.	1914	E. Baumelster.....	E. Matthes.....	15,000	5,101	229,022	75,446
Auburn.....	King	*Citizens State Bank.....	1914	A. O. MacCallum.....	Stanley W. Brown..	50,000	5,963	121,435	52,162
Ballard.....	King	*Scandinavian American Bank. (Branch of Scandinavian American Bank, Seattle.)	.....	J. E. Chilberg.....	W. V. Rinehart, Manager.	.....	.....	.....	.....
Ballard.....	King	Union Savings & Trust Company. (Branch of Union Savings & Trust Company, Seattle.)	.....	J. D. Hoge.....	C. W. Osler, Mgr.	.....	.....	.....	.....
Battleground..	Clarke	State Bank of Battleground.	1914	Fred Ellis.....	H. O. Cornell.....	10,000	1,072	60,519	18,700
Bellevue.....	King	State Bank of Bellevue.....	1914	D. E. Bigelow.....	D. E. Bigelow.....	10,000	1,404	22,011	12,405
Bellingham.....	Whatcom	Northwestern State Bank.....	1906	I. J. Adair.....	B. T. Drake.....	100,000	60,740	1,315,988	423,104
Bickleton.....	Klickitat	Bickleton State Bank.....	1906	Charles E. Flower.....	S. A. Rossier.....	25,000	16,148	226,258	51,186

* Member of Washington Bank Depositors Guaranty Fund.

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 20, 1917.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Black Diamond	King	State Bank of Black Diamond	1914	Chalmers Rutherford	Samuel D. Malcolm	\$12,000	† \$6,688	\$20,352	\$12,888
Blaine	Whatcom	Home State Bank	1908	Albert Still	O. K. Middleton	25,000	11,883	342,929	75,950
Bothell	King	Bothell State Bank	1908	Gerh. Erickson	A. G. Worthington	12,500	1,780	81,444	20,640
Bremerton	Kitsap	Bremerton Trust & Savings Bank	1914	Geo. E. Miller	N. D. MacGillivray	25,000	4,351	283,432	95,883
Bremerton	Kitsap	Citizens Bank	1909	S. Migliavacca	Ernest O. Ebert	50,000	9,660	339,299	81,615
Bridgeport	Douglas	Bridgeport State Bank	1906	Herman Cornehl	T. J. East	15,000	14,001	128,745	30,897
Buckley	Pierce	State Bank of Buckley	1907	C. O. Steberg	A. O. Johnson	25,000	6,813	239,306	84,080
Carnation	King	Tolt State Bank	1911	Frank Stossel	E. B. Cowles	10,000	3,763	71,197	20,062
Cashmere	Chelan	Cashmere State Bank	1907	Guy C. Browne	E. F. Stowell	25,000	8,115	102,452	33,900
Cashmere	Chelan	Farmers & Merchants Bank	1906	John C. Lilly	C. D. Hafferty, Jr.	25,000	3,575	319,810	54,240
Castle Rock	Cowlitz	The Castle Rock Bank	1904	J. A. Byerly	G. L. Buland	25,000	31,354	280,174	109,018
Cathlamet	Wahkiakum	Wahkiakum County Bank	1909	Will T. Wright	Th. Fagstad	10,000	4,718	128,568	20,383
Centerville	Klickitat	Farmers State Bank	1914	L. T. Gillett	J. O. Kaiders	15,000	2,108	121,548	42,004
Centralia	Lewis	Centralia State Bank	1915	W. J. Patterson	O. O. Spencer	100,000	12,479	330,703	65,217
Centralia	Lewis	Farmers & Merchants Bank	1911	B. H. Rhodes	O. Paul Uhlmann	75,000	14,042	673,557	215,736
Centralia	Lewis	*Field & Lease, Bankers	1908	John A. Field	Albert Smith	25,000	8,706	364,683	146,853
Charleston	Kitsap	State Bank of Charleston	1914	F. J. Carver	A. E. Galbraith	15,000	1,811	49,893	8,236
Chehalis	Lewis	Coffman-Dobson Bank & Trust Company	1904	N. B. Coffman	D. T. Coffman	150,000	114,851	1,694,955	348,822
Chehalis	Lewis	Security State Bank	1908	J. W. Alexander	W. J. Ford	25,000	38,981	422,471	122,695
Chelan	Chelan	*Miners & Merchants Bank	1907	J. A. VanSlyke	H. W. VanSlyke	25,000	32,741	272,697	102,285

* Member of Washington Bank Depositors Guaranty Fund. † Expenses.

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 20, 1917.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Osash and Due from Banks
Ochesaw.....	Okanogan.....	*Commercial Bank (Branch of Commercial Bank of Conconully.)	.....	N. E. Whitworth.....	J. B. Jones, Mgr.....	.....	.....	.....	.....
Chewelah.....	Stevens.....	Bank of Chewelah.....	1911	Thomas Bowers.....	H. L. Blamborough.....	\$15,000	\$2,235	\$120,000	\$20,505
Clarkston.....	Asotin.....	State Bank of Clarkston.....	1907	A. E. Clarke.....	Henry Elliott.....	15,000	5,324	137,154	39,068
Clear Lake.....	Skagit.....	First State Bank.....	1914	O. E. Bingham.....	Q. R. Bingham.....	10,000	2,597	66,640	31,791
Cle Elum.....	Kittitas.....	Cle Elum State Bank.....	1904	Frank Carpenter.....	L. R. Nelson.....	50,000	20,224	698,255	268,013
Coolfax.....	Whitman.....	Coolfax State Bank.....	1908	J. K. McCormack.....	R. F. Bigelow.....	60,000	12,329	222,708	37,541
Coolfax.....	Whitman.....	First Savings & Trust Bank of Whitman County.	1905	Alfred Coolidge.....	H. G. DePledge.....	50,000	23,990	337,075	92,982
Colton.....	Whitman.....	Colton State Bank.....	1908	M. Schultze, Jr.....	A. B. Snider.....	15,000	4,549	296,549	44,068
Colville.....	Stevens.....	Bank of Colville.....	1900	G. W. Peddycord.....	O. L. Baker.....	100,000	23,559	624,419	119,579
Colville.....	Stevens.....	Colville Loan & Trust Company.....	1909	Geo. W. Seal.....	I. J. Lasswell, Sec'y.....	25,000	3,674	196,166	30,290
Conconully.....	Okanogan.....	*Commercial Bank.....	1880	N. E. Whitworth.....	F. J. May.....	40,000	16,978	384,533	117,240
Concrete.....	Skagit.....	State Bank of Concrete.....	1914	J. C. Wikson.....	Frank D. LeBold.....	10,000	4,067	107,811	45,504
Connell.....	Franklin.....	Farmers State Bank.....	1915	C. W. Nelson.....	J. B. Helmick.....	10,000	5,025	197,210	72,698
Connell.....	Franklin.....	State Bank of Connell.....	1907	John H. Schlomer.....	W. H. Miller.....	15,000	9,160	296,424	67,080
Conway.....	Skagit.....	*State Bank of Conway.....	1915	John S. Finstad.....	A. Garborg.....	10,000	3,366	96,348	25,362
Coulee City.....	Grant.....	Coulee State Bank.....	1906	James Howell.....	W. O. Straight.....	25,000	22,011	270,848	102,960
Coupeville.....	Island.....	Bank of Commerce.....	.....	Daniel Kelleher.....	Edward S. Bryan, Assistant Cashier.....	.....	.....	.....	.....
Oreston.....	Lincoln.....	Oreston State Bank.....	1902	J. M. Dungan.....	Geo. L. Duncan.....	25,000	12,646	313,568	60,233
Ouster.....	Whitcom.....	Custer State Bank.....	1914	O. R. Behme.....	A. F. Stone.....	10,000	746	72,064	27,064

* Member of Washington Bank Depositors Guaranty Fund.

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 20, 1917.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Davenport....	Lincoln....	Lincoln County State Bank.....	1901	J. W. Fry.....	Fred S. Wells.....	\$50,000	\$20,559	\$665,238	\$110,138
Deer Park....	Spokane....	First State Bank.....	1907	O. F. Kelly.....	Evan Berg.....	25,000	2,960	185,434	68,468
Duval.....	King.....	*Duval State Bank.....	1912	A. H. Boyd.....	C. Beadon Hall....	15,000	5,080	108,060	23,199
East Stanwood	Snohomish..	*State Bank of East Stanwood.....	1910	A. Garborg.....	C. R. Amundson....	15,000	8,062	211,551	70,471
Eatonville....	Pierce.....	Eatonville State Bank.....	1913	F. M. Roberts....	Norman J. Bruen....	10,000	2,732	98,977	20,589
Edison.....	Skagit.....	Farmers & Merchants Bank.....	1908	N. B. Hannay.....	J. K. Hannay.....	12,000	6,290	153,448	67,004
Edmonds.....	Snohomish..	State Bank of Edmonds.....	1907	L. W. Lewis.....	H. V. Allen.....	25,000	4,402	125,264	35,739
Edwall.....	Lincoln....	Bank of Edwall.....	1902	John F. Green.....	Ward Jessup.....	25,000	8,783	191,026	30,474
Elberton.....	Whitman....	Elberton State Bank.....	1909	J. M. Seagle.....	R. B. Walker.....	10,000	2,689	70,849	14,877
Ellensburg....	Kittitas....	*Farmers Bank.....	1905	James Ramsay.....	J. C. Sterling.....	50,000	61,256	982,943	241,651
Elma.....	Grays Harbor	Bank of Elma.....	1907	A. D. Devonshire..	E. L. France.....	15,000	14,446	333,921	125,376
Elma.....	Grays Harbor	Farmers & Lumbermen's Bank....	1910	Henry McCleary...	W. L. Boomer.....	20,000	6,562	186,317	45,026
Eltopia.....	Franklin....	*Eltopia State Bank.....	1913	Felix Van Hollebeke..	W. C. Bannerman..	10,000	4,078	78,368	33,578
Endicott.....	Whitman....	Bank of Endicott.....	1903	M. A. Sherman.....	M. A. Sherman, Jr.	25,000	8,452	270,380	25,004
Entiat.....	Chelan.....	Entiat State Bank.....	1914	Harmon Wilcox.....	J. G. Kennedy.....	10,000	† 76	55,904	24,112
Enumclaw.....	King.....	*Peoples State Bank.....	1910	B. B. Kibler.....	J. W. Davis.....	25,000	11,226	238,990	38,890
Enumclaw.....	King.....	*State Bank of Enumclaw.....	1904	S. Lafrombolise.....	A. C. Johansen....	30,000	9,068	311,509	79,770
Ephrata.....	Grant.....	*Grant County Bank.....	1912	E. C. Davis.....	J. T. Wilkins.....	15,000	1,297	220,428	44,718
Everett.....	Snohomish..	Bank of Commerce.....	1900	Daniel Kelleher.....	E. C. Olson.....	100,000	32,001	1,015,157	211,708
Everett.....	Snohomish..	Bank of Commerce. (Pine St. Branch.)	.....	Daniel Kelleher.....	D. W. Dykeman, Asst. Cashier.	.....	.....	.....	.....

* Member of Washington Bank Depositors Guaranty Fund. † Expenses.

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 20, 1917.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Everett.....	Snohomish...	Citizens Bank & Trust Company...	1912	N. L. Thompson.....	Frank L. Cooper...	\$100,000	\$25,798	\$664,674	\$112,382
Everett.....	Snohomish...	Everett Trust & Savings Bank....	1902	Wm. O. Butler.....	J. W. Clark.....	25,000	39,787	501,065	82,123
Everson.....	Whatcom.....	Nooksack Valley State Bank.....	1906	B. Bollerud	Henry P. Johnson..	15,000	3,147	161,329	46,210
Fairfield.....	Spokane.....	Bank of Fairfield.....	1908	Henry Treede	O. E. Moss.....	12,000	8,844	344,128	114,322
Farmington...	Whitman...	Bank of Farmington.....	1887	Alfred Coolidge	W. Claude Renfrew.	25,000	10,921	192,683	69,480
Ferndale.....	Whatcom.....	Ferndale State Bank.....	1904	H. E. Campbell.....	Percy Hood	15,000	9,518	275,815	67,212
Friday Harbor	San Juan.....	*San Juan County Bank.....	1883	Gene O. Gould.....	Van E. Sargent....	85,000	21,014	408,827	172,007
Garfield.....	Whitman...	First State Bank.....	1902	R. A. Johnson.....	I. M. McCarthy....	50,000	17,449	446,468	70,225
Goldendale....	Klickitat....	Brooks & Co. Bank.....	1914	N. B. Brooks.....	A. E. Coley.....	25,000	9,046	267,359	102,889
Goldendale....	Klickitat....	Goldendale State Bank.....	1904	L. T. Gillett.....	C. E. Crooks.....	25,000	37,075	405,087	183,600
Grandview....	Yakima.....	Grandview State Bank.....	1910	A. W. Hawn.....	John A. Vanderpool	10,000	9,457	237,185	42,229
Granger.....	Yakima.....	Union Bank	1905	H. C. Davis.....	A. C. Snowden.....	10,000	6,444	91,154	21,175
Granite Falls..	Snohomish...	Granite Falls State Bank.....	1917	B. E. Chappell.....	C. E. Stage.....	15,000	1,214	83,701	14,523
Hamilton.....	Skagit.....	Hamilton State Bank.....	1914	J. H. Smith.....	H. S. Crothers....	10,000	1,640	76,008	32,212
Harrington....	Lincoln.....	Harrington State Bank.....	1904	John E. Russell.....	H. O. Jones.....	30,000	15,728	299,608	43,150
Hartline.....	Grant.....	Hartline State Bank.....	1908	H. B. Jones.....	May S. Jones.....	25,000	16,835	246,941	85,455
Hatton.....	Adams.....	Farmers State Bank.....	1907	W. H. Miller.....	J. C. Crossland...	10,000	11,817	132,604	16,686
Hillyard.....	Spokane.....	Hillyard State Bank.....	1905	W. W. Cooper.....	H. O. Howe.....	25,000	25,785	414,831	145,351
Hoquiam.....	Grays Harbor	Lumberman's Bank	1904	W. F. Ferabee.....	R. E. Dawdy.....	100,000	82,161	717,456	323,431

* Member of Washington Bank Depositors Guaranty Fund.

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 30, 1917.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Hunters	Stevens	Hunters Exchange Office..... (Branch of Lincoln County State Bank, Davenport.)		J. W. Fry.....	G. H. Inkster, Mgr.				
Ilwaco	Pacific	Southwestern Washington Bank...	1911	H. Freeborough.....	P. L. Sinclair.....	\$10,000	\$888	\$152,637	\$25,609
Ione	Fend Oreille	Ione State Bank.....	1909	O. N. Bufum.....	E. Thompson.....	10,000	2,179	141,586	35,354
Isaquah	King	Isaquah State Bank.....	1913	Herman O. Schultz...	A. J. Peters.....	25,000	1,770	141,424	39,822
Johnson	Whitman	Farmers State Bank.....	1907	A. O. White.....	Frank Willoughby..	10,000	1,761	79,307	23,984
Kahlotus	Franklin	Farmers State Bank.....	1917	E. F. Redd.....	J. V. McCall.....	15,000	340	52,335	13,045
Kalama	Oowlitz	*Kalama State Bank.....	1916	O. C. Buckles.....	G. N. Oampbell.....	15,000	684	91,980	18,951
Kelso	Oowlitz	Kelso State Bank.....	1898	F. M. Carothers.....	F. L. Stewart.....	25,000	27,533	280,305	66,522
Kennewick	Benton	American Security Bank.....	1916	M. O. Klitten.....	Caroline Klitten...	20,000	2,646	79,115	16,110
Kent	King	*State Bank of Kent.....	1906	W. H. Overlock.....	Chas. B. Oley.....	40,000	14,323	311,240	77,683
Kettle Falls	Stevens	Bank of Colville..... (Branch of Bank of Colville, Colville.)		G. W. Peddyoord.....	J. M. Williams, Manager.				
Kirkland	King	Kirkland State Bank.....	1911	Herman O. Schultz....	Glenn M. Johnson..	10,000	1,933	96,304	14,252
Kititas	Kititas	*Kititas State Bank.....	1911	Geo. W. Snodgrass....	H. W. Higman.....	10,000	2,023	80,919	13,621
Krupp	Grant	*Farmers Bank.....	1907	M. A. Wiley.....	B. F. Faff.....	10,000	5,798	134,394	29,410
LaCenter	Clarke	*LaCenter State Bank.....	1911	W. A. Mansfield.....	C. A. Button.....	10,000	4,214	37,392	36,253
LaConner	Skagit	LaConner State Bank.....	1912	N. B. Hannay.....	W. S. Packard.....	25,000	20,940	305,365	154,051
LaCrosse	Whitman	First State Bank.....	1911	P. B. Stravens.....	Ira M. Camp.....	60,000	37,214	592,025	91,472
LaCrosse	Whitman	Security State Bank.....	1914	F. L. Gordon.....	J. E. Moore.....	15,000	4,035	132,575	46,363
Late Stevens	Shoshone	The Rucker Bank.....	1914	B. J. Rucker.....	A. D. Oampbell.....	10,000	1,332	70,935	43,799

* Member of Washington Bank Depositors Guaranty Fund.

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 20, 1917.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Lamont.....	Whitman....	Lamont State Bank.....	1908	E. A. Shields.....	B. J. Ellis.....	\$10,000	\$9,542	\$259,996	\$85,046
Langley.....	Island.....	Langley State Bank.....	1913	Wm. Kohlwe.....	James O. Langley..	10,000	+ 500	43,885	7,013
Latah.....	Spokane....	Bank of Latah.....	1907	Wm. A. McEachern...	A. L. Faler.....	15,000	4,961	141,124	49,620
Leavenworth..	Chelan.....	Leavenworth State Bank.....	1910	F. A. Sinclair.....	Robt. B. Field.....	25,000	8,454	317,338	116,454
Lind.....	Adams.....	Farmers State Bank.....	1917	John M. Phillips.....	John W. Webster..	25,000	1,941	91,423	32,497
Loomis.....	Okanogan....	Okanogan State Bank..... (Branch of Okanogan State Bank, Riverside.)		Hans Lund.....	L. E. Wede, Mgr.....				
Lyle.....	Klickitat....	State Bank of Lyle.....	1911	O. F. Hendricksen....	L. H. Lawson.....	12,500	2,623	87,373	49,949
Lyman.....	Skagit.....	Lyman State Bank.....	1912	G. A. Minkler.....	F. O. Fellows.....	10,000	4,499	126,301	55,944
Lynden.....	Whatcom....	Lynden State Bank.....	1907	P. M. Serrurier.....	W. B. VanderGriend	25,000	19,668	458,143	116,248
Mabton.....	Yakima.....	The Mabton Bank.....	1904	A. T. Carlson.....	Earl Larrison.....	25,000	9,108	225,108	46,535
Malden.....	Whitman....	Farmers & Merchants Bank.....	1908	L. F. Rohleder.....	R. E. Gullick.....	20,000	1,886	147,623	38,063
Mansfield.....	Douglas.....	Commercial State Bank.....	1916	H. K. Robbins.....	Z. V. Leslie.....	25,000	2,425	114,012	31,044
Mansfield.....	Douglas.....	Mansfield State Bank.....	1909	L. H. Meritt.....	Geo. G. Knauss.....	25,000	34,826	279,397	63,463
Marysville....	Shoshomish..	Marysville State Bank.....	1893	S. T. Smith.....	E. E. Oolvin.....	25,000	7,733	205,979	46,064
Metalline Falls.	Fend Oreille..	Metalline Falls State & Savings Bank.....	1911	H. E. Neelands.....	A. W. Dressel.....	10,000	1,293	72,083	24,415
Molson.....	Okanogan....	*Molson State Bank.....	1908	O. S. Barus.....	G. B. Avery.....	25,000	4,765	198,312	35,292
Montesano....	Grays Harbor	Montesano State Bank.....	1897	A. D. Devonshire.....	W. H. France.....	50,000	68,799	727,971	155,568
Morton.....	Lewis.....	State Bank of Morton.....	1911	F. M. Broadbent.....	W. W. Morse.....	11,000	1,257	78,439	39,325
Mount Vernon.	Skagit.....	Skagit County Savings Bank & Trust Company.....	1911	Geo. D. McLean.....	Frank C. Pickering.	25,000	12,954	237,845	47,595

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DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 20, 1917.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Oath and Due from Banks
Moose City...	Yakima...	*Moose State Bank.....	1914	L. H. Deamarals.....	J. E. McGrath.....	\$10,000	\$2,601	\$76,361	\$24,507
Naches.....	Yakima.....	*Naches State Bank.....	1910	A. M. Otto.....	J. E. Reynolds.....	10,000	5,706	104,368	23,336
Napavine.....	Lewis.....	*Napavine State Bank.....	1913	James P. Weter.....	C. L. Stone.....	10,000	1,753	52,292	8,329
Newport.....	Pend Oreille..	Security State Bank.....	1908	J. T. Phillips.....	E. W. Anderson.....	25,000	12,490	313,963	85,009
North Bend.....	King.....	State Bank of North Bend.....	1913	W. O. Weeks.....	Loy E. Oarlin.....	10,000	1,888	109,080	24,882
Northport.....	Stevens.....	Miners & Smelters Bank.....	1915	J. J. Day.....	J. B. Helpman.....	10,000	13,828	470,203	337,654
Oakesdale.....	Whitman.....	Commercial State Bank.....	1891	E. H. Hanford.....	H. W. Hanford.....	25,000	17,123	489,601	196,403
Oak Harbor.....	Island.....	Oak Harbor State Bank.....	1909	Robt. Moody.....	J. M. Pratt.....	15,000	5,982	107,035	26,684
Oakville.....	Grays Harbor	Oakville State Bank.....	1909	Wm. T. Perkins.....	E. I. Landstrom.....	10,000	1,543	76,427	15,216
Odessa.....	Lincoln.....	Farmers & Merchants Bank.....	1915	L. G. Nuelson.....	Hy. W. Rieke.....	25,000	9,651	220,968	49,350
Odessa.....	Lincoln.....	Union State Bank.....	1911	G. W. Finney.....	O. T. Deets.....	40,000	40,694	673,033	182,878
Okanogan.....	Okanogan.....	*Commercial Bank (Branch of Commercial Bank of Condonally.)		N. E. Whitworth.....	E. O. Quakenbush, Asst. Cashier.				
Omak.....	Okanogan.....	Omak State Bank.....	1907	J. H. Siley.....	John Scott.....	15,000	1,208	137,021	40,445
Orient.....	Ferry.....	Orient State Bank.....	1910	O. G. Barnard.....	E. S. Moore.....	10,000	1,182	48,792	14,783
Oroville.....	Okanogan.....	Bank of Oroville.....	1906	S. O. Mitchell.....	P. M. Snider.....	15,000	110	43,020	19,232
Oroville.....	Okanogan.....	Union Title & Trust Company.....	1910	S. O. Mitchell.....	P. M. Snider, Sec'y.	40,000	2,709		76
Orting.....	Pierce.....	Orting State Bank.....	1913	W. J. Thompson.....	M. E. Gallendar.....	10,000	1,313	104,441	45,921
Othello.....	Adams.....	Othello State Bank.....	1907	H. Siemens.....	J. P. Siemens.....	10,000	7,671	108,233	44,169
Outlook.....	Yakima.....	Outlook State Bank.....	1908	W. H. Norman.....	H. E. Schroeder.....	10,000	2,061	80,913	30,237

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DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 20, 1917.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Palouse.....	Whitman.....	*Security State Bank.....	1889	J. K. McCornack.....	John P. Duke.....	\$80,000	\$24,080	\$840,564	\$107,547
Pasco.....	Franklin.....	Bank of Pasco.....	1908	J. B. Orain.....	E. W. Landt.....	80,000	14,887	298,113	90,682
Pateros.....	Okanogan.....	Methow Valley Bank.....	1911	Harry J. Kerr.....	H. Gordon Kerr.....	10,000	460	63,686	24,198
Pe Ell.....	Lewis.....	Pe Ell State Bank.....	1914	E. H. Lester.....	O. W. Boynton.....	10,000	354	83,797	15,206
Pine City.....	Whitman.....	Pine City State Bank.....	1914	A. J. Stone.....	W. O. Palmer.....	15,000	6,719	172,150	67,502
Pomeroy.....	Garfield.....	Knettle State Bank.....	1914	N. D. Knettle.....	L. N. Knettle.....	50,000	19,917	640,662	233,347
Pomeroy.....	Garfield.....	Pomeroy State Bank.....	1897	R. L. Rush.....	W. B. Morris.....	50,000	110,062	1,308,740	338,242
Port Angeles.....	Clallam.....	Bank of Clallam County.....	1885	H. E. Lutz.....	S. J. Lutz.....	25,000	8,914	449,565	106,860
Port Angeles.....	Clallam.....	Port Angeles Trust & Savings Bank.....	1914	E. J. Walton.....	Benj. N. Phillips.....	26,000	3,331	201,740	37,671
Port Orchard.....	Kitsap.....	*Kitsap County Bank.....	1906	Thomas Ross.....	Otto K. Strzsek.....	20,000	5,194	148,312	36,082
Port Townsend.....	Jefferson.....	Merchants Bank.....	1889	W. M. Ladd.....	Geo. Welch.....	75,000	27,454	608,176	124,420
Poulsbo.....	Kitsap.....	Liberty Bay Bank.....	1909	Andrew B. Moe.....	A. Brygger.....	10,000	9,173	224,005	42,796
Prescott.....	Walla Walla.....	First State Bank.....	1904	H. S. Fender.....	F. J. Fiescher.....	25,000	7,009	163,770	33,367
Prosser.....	Benton.....	Citizens State Bank.....	1905	C. H. Pearl.....	Guy H. Pearl.....	25,000	24,373	342,038	90,523
Prosser.....	Benton.....	Prosser State Bank.....	1902	Harry Osterle.....	J. F. Sears.....	40,000	13,833	323,225	89,843
Pullman.....	Whitman.....	Pullman State Bank.....	1892	R. C. McCroskey.....	A. R. Metz.....	87,500	82,475	589,647	75,362
Puyallup.....	Pierce.....	Citizens State Bank.....	1898	Geo. W. Edgerton.....	W. A. Miller.....	25,000	27,069	501,409	189,745
Puyallup.....	Pierce.....	Puyallup State Bank.....	1906	J. S. Alepaugh.....	J. M. Jones.....	25,000	11,943	453,392	113,115
Quincy.....	Grant.....	Quincy Valley State Bank.....	1913	G. E. Sanderson.....	R. O. Wightman.....	10,000	5,406	143,066	29,386
Raymond.....	Pacific.....	Willapa Harbor State Bank.....	1908	H. W. MacPhail.....	E. E. Oolrett.....	50,000	18,647	486,885	143,694

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DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 20, 1917.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Reardan.....	Lincoln.....	Farmers State Bank.....	1909	John Mahrt	E. G. Ahrens.....	\$25,000	\$15,873	\$609,737	\$32,127
Redmond.....	King.....	Redmond State Bank.....	1911	F. M. Roberts.....	C. A. Shlnstrom....	10,000	6,450	141,138	33,882
Renton.....	King.....	Citizens Bank of Renton.....	1909	C. L. Dixon.....	R. W. Gilham.....	25,000	7,663	384,066	48,668
Republic.....	Ferry.....	Ferry County State Bank.....	1904	P. H. Walsh.....	Jos. L. Walsh.....	25,000	19,689	208,414	104,624
Ridland.....	Benton.....	Security State Bank.....	1914	W. R. Amon.....	A. L. Nelson.....	20,000	2,009	102,462	37,914
Ridgefield.....	Clarke.....	Ridgefield State Bank.....	1910	E. L. Thompson.....	J. E. Keith.....	10,000	2,064	90,909	40,988
Ritzville.....	Adams.....	*German American State Bank.....	1904	C. H. Clodius.....	J. F. Lansing.....	75,000	89,724	641,687	214,580
Riverside.....	Okanogan.....	Okanogan State Bank.....	1903	Hans Lund	Arthur Lund	25,000	17,757	212,205	51,765
Rockford.....	Spokane.....	Farmers & Merchants Bank.....	1906	J. W. Lowe.....	W. L. Oliver.....	17,500	4,559	231,861	119,345
Rosalia.....	Whitman.....	Bank of Rosalia, Inc.....	1898	A. J. Calhoun.....	E. W. Wagner.....	25,000	10,953	290,224	41,640
Roslyn.....	Kittitas.....	Cle Elum State Bank..... (Branch of Cle Elum State Bank.)	.....	Frank C. Carpenter	Joseph Smith Asst. Cashier.	.....	.....	.....	.....
Roy.....	Pierce.....	Roy State Bank.....	1908	Wm. T. Perkins.....	E. S. Enigh.....	10,000	4,553	97,654	23,915
Ruff.....	Grant.....	*Ruff State Bank.....	1911	M. A. Wiley.....	F. R. Amende.....	10,000	8,194	128,187	28,042
Seattle.....	King.....	American Savings Bank & Trust Company.....	1901	J. P. Gleason.....	John K. Rush.....	600,000	124,804	2,160,519	480,682
Seattle.....	King.....	Bank for Savings.....	1907	Daniel Kelleher	W. H. Crothers.....	400,000	30,788	783,075	135,241
Seattle.....	King.....	Canadian Bank of Commerce.....	1900	E. B. Ireland, Mgr.....	.....	200,000	65,423	5,961,997	3,068,821
Seattle.....	King.....	Citizens Bank of Georgetown.....	1907	Fred W. Newell.....	W. D. Millar.....	25,000	† 1,220	186,661	20,162
Seattle.....	King.....	Union Savings & Trust Co., Georgetown. (Branch of Union Savings & Trust Co., Seattle). Dexter Horton Trust & Savings Bank.	.....	J. D. Hoge.....	Max G. Schmidt, Manager.	.....	.....	.....	.....
Seattle.....	King.....	.....	1903	G. F. Clark.....	W. W. Scruby.....	400,000	148,190	7,184,254	1,171,804

* Member of Washington Bank Depositors Guaranty Fund. † Expenses.

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 20, 1917.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Seattle.....	King.....	Green Lake State Bank.....	1907	Geo. W. Lear.....	Louis K. Lear.....	\$25,000	\$10,601	\$172,798	\$48,979
Seattle.....	King.....	*Guardian Trust & Savings Bank..	1915	O. K. Sturtevant.....	A. C. Kahle.....	100,000	11,293	444,192	119,496
Seattle.....	King.....	Japanese Commercial Bank.....	1907	M. Furuja.....	M. Matsumoto	50,000	94,368	829,497	200,317
Seattle.....	King.....	King County State Bank.....	1913	J. F. Ranning.....	R. W. Green.....	30,000	1,594	142,089	21,389
Seattle.....	King.....	Metropolitan Bank	1909	H. O. Henry.....	R. F. Loomis.....	200,000	123,650	2,778,196	920,124
Seattle.....	King.....	North Side State Bank.....	1914	Jacob Schaefer	Chas. L. Schaefer..	15,000	† 222	56,802	11,696
Seattle.....	King.....	Northwest Trust & Savings Bank..	1900	E. Shorrocks.....	J. V. A. Smith.....	100,000	17,253	1,788,946	214,142
Seattle.....	King.....	Oriental American Bank.....	1905	M. Furuja.....	H. Hasegawa	40,000	8,325	358,718	64,875
Seattle.....	King.....	Peoples Savings Bank.....	1899	E. O. Neufelder.....	Jos. T. Greenleaf..	100,000	230,072	2,780,201	842,973
Seattle.....	King.....	Rainier Valley State Bank.....	1910	S. T. Toby.....	T. S. Toby.....	25,000	2,154	191,012	29,723
Seattle.....	King.....	*Scandinavian American Bank.....	1892	J. E. Chilberg.....	J. F. Lane.....	1,000,000	685,721	14,511,999	3,353,845
Seattle.....	King.....	Seaboard Bank	1916	Lee H. Wakefield.....	C. H. Howell.....	100,000	22,364	621,997	221,203
Seattle.....	King.....	Seattle Trust Company.....	1905	J. E. Chilberg.....	A. F. Bailey, Treasurer.	250,000	52,290	.....	27,088
Seattle.....	King.....	Speke Bank	1909	J. T. Klutake.....	C. M. Uyeda.....	75,000	6,978	294,886	51,138
Seattle.....	King.....	State Bank of Seattle.....	1905	E. L. Grondahl.....	Hugo Carlson	100,000	26,362	2,411,116	792,709
Seattle.....	King.....	Title Trust Company.....	1901	J. W. Maxwell.....	W. B. Shoemaker, Treasurer.	250,000	49,569	.....	32,240
Seattle.....	King.....	Union Savings & Trust Company..	1903	James D. Hoge.....	Rollin Sanford	600,000	199,556	4,710,800	1,116,072
Seattle.....	King.....	Union Trust Company.....	1892	Watson O. Squire.....	.....	500,000	4,899	.....	.....
Seattle.....	King.....	United States Trust Company.....	1909	Samuel Hill	J. O. Potter, Treasurer.	500,000	1,000,000	.....	.....
Seattle.....	King.....	University State Bank.....	1906	Harry B. Lear.....	A. W. Hogue.....	50,000	20,788	862,068	238,787

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DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 20, 1917.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Seattle.....	King.....	Washington Mutual Savings Bank (Incorporated 1899 as Washington Savings & Loan Association.)	1917	Raymond R. Frazier..	W. S. Darrow, Secretary.	.....	\$113,591	\$9,565,502	\$258,628
Seattle.....	King.....	West Seattle State Bank.....	1913	W. T. Campbell.....	J. B. Campbell.....	\$10,700	1,468	79,187	12,092
Sedro Woolley.	Skagit.....	C. E. Bingham & Co.....	1912	C. E. Bingham.....	Q. P. Reno.....	50,000	22,173	773,493	314,502
Selah.....	Yakima.....	Selah State Bank.....	1910	C. S. Sundberg.....	Elmer Dahlin.....	15,000	8,722	169,101	55,497
Sequim.....	Ottalam.....	State Bank of Sequim.....	1910	L. J. Bigelow.....	R. W. Schumacher..	10,000	2,582	111,184	26,667
Shelton.....	Mason.....	State Bank of Shelton.....	1893	M. E. Reed.....	O. I. Pritchard.....	25,000	30,713	436,067	122,675
Snohomish.....	Snohomish..	Commercial Bank of Snohomish County.	1903	Herman Friese.....	Alex. Livingston...	25,000	8,868	197,066	37,580
South Bend...	Pacific.....	Pacific State Bank.....	1906	Joseph G. Helm.....	L. W. Homan.....	100,000	42,851	1,023,874	192,844
Spangle.....	Spokane.....	*State Bank of Spangle.....	1906	John Peters.....	O. W. Newton.....	15,000	6,676	212,431	60,110
Spokane.....	Spokane.....	Bank of Montreal.....	1908	W. Dick, Mgr.....	.....	100,000	13,589	1,470,312	525,064
Spokane.....	Spokane.....	Clark Bros. & Klein Trust Company.	1901	A. C. Klein.....	J. Heaton, Sec'y..	15,000	872	.....	23,395
Spokane.....	Spokane.....	Farmers & Mechanics Bank.....	1904	Ortho Dorman.....	B. O. Yancey.....	50,000	9,241	311,392	84,604
Spokane.....	Spokane.....	Lincoln Trust Company.....	1916	M. E. Hay.....	E. T. Hay, Sec'y..	100,000	47,547	.....	7,171
Spokane.....	Spokane.....	*Scandinavian American Bank.....	1908	O. A. Johnson.....	O. Larson.....	100,000	30,159	983,716	147,910
Spokane.....	Spokane.....	*Security State Bank.....	1908	G. W. Stocker.....	E. W. Edgington...	25,000	8,512	341,782	106,496
Spokane.....	Spokane.....	*Spokane & Eastern Trust Company.	1890	R. L. Rutter.....	W. T. Triplett, Secretary.	1,000,000	341,217	11,697,680	2,666,362
Spokane.....	Spokane.....	Spokane State Bank.....	1907	J. A. Anderson.....	O. W. Tupper.....	50,000	11,448	237,154	53,216
Spokane.....	Spokane.....	*Union Park Bank.....	1906	H. M. Strathern.....	E. R. Anderson.....	25,000	8,046	193,733	31,008
Spokane.....	Spokane.....	Union Trust Company.....	1907	D. W. Twohy.....	A. S. Blum, Sec'y..	200,000	110,008	186,638	91,062

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DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 20, 1917.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Spokane.....	Spokane.....	Wall Street Bank.....	1906	Gust Pearson.....	G. Pearson.....	\$25,000	\$4,466	\$102,890	\$17,138
Spokane.....	Spokane.....	Washington Safe Deposit & Trust Company.....	1901	W. S. McCrea.....	W. G. Merryweather, Secretary.....	100,000	151,846	.....	8,782
Spokane.....	Spokane.....	Washington Trust Company.....	1902	M. B. Connelly.....	Ira W. Bedle.....	200,000	59,443	846,476	204,566
Sprague.....	Lincoln.....	Bank of Sprague.....	1901	A. L. Smalley.....	Ralph R. Jones.....	30,000	21,567	822,603	124,888
Sprague.....	Lincoln.....	Farmers State Bank.....	1915	H. D. Mills.....	August Witt.....	25,000	2,382	169,260	49,266
Springdale.....	Stevens.....	Farmers & Merchants Bank.....	1906	C. W. Winter.....	Chas. O. Snapp.....	10,000	3,277	90,668	17,888
Stanwood.....	Snohomish.....	Bank of Stanwood.....	1904	W. C. Brokaw.....	Clyde W. Brokaw.....	25,000	14,188	471,744	170,969
Starbuck.....	Columbia.....	Bank of Starbuck.....	1906	W. E. Sprout.....	M. C. Zinthoe.....	25,000	9,484	86,408	30,662
Stepoe.....	Whitman.....	Stepoe State Bank.....	1911	Lewis Stahet.....	M. C. Handley.....	20,000	1,677	62,267	16,813
Stevenson.....	Skamania.....	Bank of Stevenson.....	1907	E. P. Ash.....	Geo. F. Christensen.....	10,000	6,361	161,360	32,642
St. John.....	Whitman.....	*Farmers State Bank.....	1914	E. C. White.....	H. O. Conn.....	20,000	2,427	186,434	32,708
St. John.....	Whitman.....	St. John State Bank.....	1904	H. C. Fisher.....	Harry Terhune.....	25,000	9,001	447,806	78,965
Sultan.....	Snohomish.....	Citizens Bank of Sultan.....	1910	G. G. Startup.....	W. M. Jenkins.....	10,000	3,480	92,847	22,691
Sumas.....	Whatcom.....	Garrison Bros. State Bank.....	1910	L. A. Garrison.....	F. S. Garrison.....	40,000	7,738	209,718	100,136
Sunnier.....	Pierce.....	Farmers State Bank.....	1916	C. M. Oase.....	R. P. Finney.....	25,000	2,866	197,136	35,432
Sunnyside.....	Yakima.....	The Sunnyside Bank.....	1902	R. G. Page.....	Horace L. Miller.....	50,000	14,461	377,812	186,602
Tacoma.....	Pierce.....	Fidelity Trust Company.....	1899	Jno. S. Baker.....	H. V. Alward.....	500,000	526,761	5,329,469	1,302,212
Tacoma.....	Pierce.....	North Pacific Bank.....	1906	E. S. Prentice.....	P. Wallerich.....	25,000	12,206	260,761	79,000
Tacoma.....	Pierce.....	Puget Sound Bank & Trust Company.....	1890	H. N. Tinker.....	W. W. Newschwander.....	100,000	57,841	1,651,869	418,962
Tacoma.....	Pierce.....	Scandinavian American Bank.....	1907	J. E. Ohlberg.....	O. S. Larson, Mgr.....	200,000	15,781	2,361,439	568,313

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DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 30, 1917.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Tacoma.....	Pierce.....	Tacoma Savings Bank & Trust Company.	1913	Chas. H. Hyde.....	A. A. Miller.....	\$200,000	\$55,000	\$1,173,564	\$236,558
Tekoa.....	Whitman....	Citizens State Bank.....	1904	A. B. Willard.....	R. S. Kalbfleisch...	25,000	13,378	840,297	47,016
Tekoa.....	Whitman....	Tekoa State Bank.....	1902	W. A. Mosier.....	O. D. McKeen.....	30,000	22,205	414,605	89,442
Tedno.....	Thurston....	Citizens Bank.....	1914	S. M. Peterson.....	L. H. Hubbard.....	10,000	856	87,988	16,888
Thornton....	Whitman....	Omegys, Hanford & Miller Bank.	1914	H. W. Hanford.....	Ralph Omegys ..	15,000	4,655	258,762	97,061
Toledo.....	Lewis.....	Toledo State Bank.....	1909	R. W. Bell.....	R. W. Bell.....	10,000	2,887	97,262	24,588
Tonasket....	Okanogan...	Tonasket State Bank.....	1917	John Woodward ..	F. J. May.....	30,000	2,788	.....	31,182
Toppenish..	Yakima.....	Central Bank of Toppenish.	1910	H. M. Gilbert.....	H. B. Miller.....	50,000	10,113	298,887	95,913
Toppenish..	Yakima.....	Traders Bank.....	1908	J. D. Cornett.....	W. S. Doran.....	25,000	14,754	418,050	138,236
Touchet.....	Walla Walla..	Touchet State Bank.....	1914	H. H. Hanson.....	O. L. Reun.....	15,000	1,606	76,754	24,919
Twisp.....	Okanogan...	Commercial Bank.....	1909	Wm. G. Hughes.....	Geo. W. Sprouse...	35,000	12,548	142,077	25,009
Uniontown...	Whitman....	Farmers State Bank.....	1908	S. Hillard.....	C. W. Bean.....	20,000	6,955	234,696	54,083
Vader.....	Lewis.....	Little Falls State Bank.....	1911	R. H. Campbell.....	A. N. Cheney.....	10,000	2,511	72,886	25,884
Valley.....	Stevens.....	Security State Bank.....	1917.	C. W. Winter.....	R. D. Brooke, Acting Cashier.	15,000	2,620	108,063	31,149
Valleyford...	Spokane.....	Community State Bank.....	1916	C. P. Thomas.....	O. H. Tart.....	10,000	327	41,699	4,713
Vancouver...	Clarke.....	*Washington Exchange Bank.....	1912	Lloyd DuBois.....	O. F. Zumsteg.....	50,000	8,727	317,837	71,582
Vashon.....	King.....	Vashon State Bank.....	1909	T. Hansen.....	.....	10,000	3,357	97,495	29,239
Waitsburg...	Walla Walla..	Exchange Bank.....	1904	M. Zuger, Sr.....	H. P. Petersen.....	50,000	29,605	285,885	64,685
Walla Walla...	Walla Walla..	Farmers Savings Bank.....	1899	Allen H. Reynolds..	A. A. King.....	200,000	31,874	1,524,155	261,443

* Member of Washington Bank Depositors Guaranty Fund.

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 20, 1917.—Continued.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Walla Walla..	Walla Walla..	Peoples State Bank.....	1911	H. H. Marshall.....	W. H. Tharp.....	\$100,000	\$22,017	\$1,240,707	\$306,287
Walla Walla..	Walla Walla..	Walla Walla Safety Deposit & Trust Company.....	1900	W. P. Lathrop.....	T. A. Paul, Sec'y...	4,000	.....	.....	.....
Wapato.....	Yakima.....	American Commercial Bank.....	1917	P. A. Olney.....	Sam R. McCaw.....	25,000	2,295	.....	.....
Warden.....	Grant.....	Warden State Bank.....	1908	Chas. Lindenberg	I. H. Mullooney	10,000	5,537	90,760	21,612
Washougal....	Clarke.....	*Clarke County Bank.....	1907	C. M. Keep.....	Thos. S. Keep.....	15,000	2,943	136,497	30,002
Waterville....	Douglas....	Douglas County Bank.....	1904	M. W. Lies.....	C. S. Valentine.....	30,000	38,122	1,190,680	263,368
Waterville....	Douglas....	Waterville Savings Bank.....	1904	C. T. Hansen.....	Geo. P. Wiley.....	50,000	25,808	488,808	65,362
Waverly.....	Spokane....	Waverly Exchange Bank.....	1908	F. Klenbaum	Ralph M. Darknell..	10,000	3,367	102,067	49,000
Wenatchee....	Chelan.....	Columbia Valley Bank.....	1894	Guy C. Brown.....	Chas. E. Owens.....	100,000	34,185	984,069	269,863
Wenatchee....	Chelan.....	*Commercial Bank & Trust Company.....	1902	Frank W. Shultz.....	David Holmberg	50,000	5,194	661,461	264,490
Wheeler.....	Grant.....	*Wheeler State Bank.....	1914	E. C. Davis.....	J. E. Bassett.....	10,000	3,226	85,885	29,200
White Bluffs..	Benton.....	First Bank of White Bluffs.....	1909	L. E. Johnson.....	W. J. Kincaid.....	10,000	1,717	77,557	24,725
White Salmon.	Klickitat....	Columbia State Bank.....	1916	G. A. Read.....	A. C. Keethaver.....	25,000	2,679	211,971	30,940
White Swan....	Yakima.....	White Swan Bank.....	1916	Alexander Mackel	C. E. Reing.....	10,000	368	18,909	9,234
Wilbur.....	Lincoln....	State Bank of Wilbur.....	1912	J. McPherson	Chas. Hudkins	50,000	13,770	744,117	180,065
Wilkeson.....	Pierce.....	First Bank of Wilkeson.....	1908	W. H. Pringle.....	T. J. Anderson.....	15,000	5,606	213,684	69,001
Wilson Creek..	Grant.....	Wilson Creek State Bank.....	1913	A. A. Weaver.....	D. F. Mordhorst....	15,000	3,242	113,567	20,820
Winlock.....	Lewis.....	State Bank of Winlock.....	1910	H. A. Baldwin.....	Frank R. Ness.....	15,000	3,673	143,551	22,963
Winona.....	Whitman....	Bank of Winona.....	1907	W. C. Morrow.....	Louis Elert	15,000	8,344	196,811	30,587

* Member of Washington Bank Depositors Guaranty Fund.

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 30, 1917.—Concluded.

Town	County	NAME OF BANK	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Cash and Due from Banks
Winthrop.....	Okanogan....	Farmers State Bank.....	1915	Wm. G. Hughes.....	C. B. Jaynes.....	\$10,000	\$1,562	\$70,677	\$19,295
Withrow.....	Douglas.....	Withrow State Bank.....	1913	F. F. Weston.....	L. A. Weston.....	25,000	6,923	829,821	75,461
Woodland.....	Cowlitz.....	*Woodland State Bank.....	1907	L. N. Plamondon.....	Geo. E. Cochrane..	25,000	3,937	170,964	39,499
Yacolt.....	Clarke.....	*First State Bank.....	1910	O. F. Hendricksen....	O. Jorgen Olson....	10,000	5,608	108,961	42,225
Yakima.....	Yakima.....	Central Bank & Trust Company..	1910	H. O. Davis.....	E. S. Rowe.....	50,000	5,670	247,638	59,893
Yakima.....	Yakima.....	*Yakima Trust Company.....	1906	H. O. Lucas.....	Joe L. Clift.....	100,000	20,821	819,682	269,284
Yakima.....	Yakima.....	*Yakima Valley Bank.....	1902	O. A. Fichter.....	Chas. Heath	100,000	26,920	1,198,238	276,670

* Member of Washington Bank Depositors Guaranty Fund.

DIRECTORY OF NATIONAL BANKS OF THE STATE OF WASHINGTON.

Town	County	NAME OF BANK	President	Cashier	Capital Stock	Surplus and Undivided Profits	Time Demand Deposits	Due to Banks and Other Liabilities	Due from Banks, Cash and Exchange
Auburn.....	King.....	First National Bank.....	C. M. Hall.....	W. T. Behne.....	\$50,000	\$19,000	\$511,000	.....	\$132,000
Bellingham....	Whatcom....	Bellingham National Bank.....	V. A. Roeder.....	F. F. Handschy....	200,000	325,000	2,237,000	\$44,000	623,000
Bellingham....	Whatcom....	First National Bank.....	E. W. Purdy.....	John Kalken.....	200,000	212,000	2,969,000	115,000	982,000
Bellingham....	Whatcom....	Northwestern National Bank.....	H. B. Paige.....	C. K. McMullen....	100,000	30,000	1,010,000	45,000	341,000
Bremerton....	Kitsap.....	First National Bank.....	C. E. Thomas.....	C. B. West.....	50,000	8,000	538,000	.....	139,000
Brewster.....	Okanogan...	First National Bank.....	Amos Topper.....	Fred D. Rice.....	25,000	6,000	124,000	5,000	23,000
Burlington....	Skagit.....	Burlington National Bank.....	H. E. Cleveland...	Chas. Callahan....	25,000	4,000	168,000	.....	34,000
Burlington....	Skagit.....	First National Bank.....	J. H. Knutzen.....	E. L. Wilson.....	25,000	5,000	156,000	.....	69,000
Camas.....	Clarke.....	First National Bank.....	O. F. Johnson.....	F. M. Hayungs....	25,000	12,000	331,000	.....	60,000
Chehalis.....	Lewis.....	Chehalis National Bank.....	D. W. Noble.....	A. S. Cory.....	50,000	18,000	529,000	.....	85,000
Cheney.....	Spokane....	National Bank of Cheney.....	F. M. Martin.....	N. A. Rolfe.....	25,000	5,000	206,000	.....	67,000
Cheney.....	Spokane....	Security National Bank.....	W. J. Sutton.....	R. H. Macartney..	25,000	19,000	474,000	.....	89,000
Chewelah....	Stevens....	First National Bank.....	C. W. Winter.....	F. L. Ednochl.....	25,000	15,000	384,000	7,000	56,000
Clarkston....	Asotin.....	First National Bank.....	C. F. Waterman...	W. A. Waterman...	25,000	7,000	400,000	55,000	121,000
Cle Elum.....	Kittitas....	First National Bank.....	W. H. Pringle....	J. C. Beeson.....	25,000	7,000	277,000	.....	72,000
Colfax.....	Whitman...	Colfax National Bank.....	O. L. Mackenzie...	Dolph Coolidge....	200,000	75,000	1,418,000	221,000	437,000
Colfax.....	Whitman...	Farmers National Bank.....	P. B. Stravens...	S. A. Kimbrough...	100,000	35,000	1,146,000	299,000	208,000
Colville.....	Stevens....	First National Bank.....	Hugh Waddell....	A. L. Rogers.....	60,000	25,000	498,000	5,000	31,000
Davenport....	Lincoln....	Davenport National Bank.....	D. M. Drumbeller.	E. N. Imus.....	100,000	44,000	1,229,000	7,000	387,000
Dayton.....	Columbia....	Broughton National Bank.....	C. J. Broughton..	A. P. Cahiel.....	50,000	25,000	689,000	.....	243,000

DIRECTORY OF NATIONAL BANKS OF THE STATE OF WASHINGTON.—Continued.

Town	County	NAME OF BANK	President	Cashier	Capital Stock	Surplus and Undivided Profits	Time and Demand Deposits	Due to Banks and Other Liabilities	Due from Banks, Cash and Exchange
Dayton.....	Columbia.....	Columbia National Bank.....	Levi Ankeny.....	G. Jackson.....	\$100,000	\$210,000	\$1,371,000	\$6,000	\$612,000
Ellensburg.....	Kittitas.....	National Bank of Ellensburg.....	E. H. Snowdon.....	S. S. Nesbit.....	50,000	5,000	446,000	.....	86,000
Ellensburg.....	Kittitas.....	Washington National Bank.....	J. H. Smithson.....	C. W. Johnson.....	50,000	86,000	1,114,000	29,000	286,000
Everett.....	Snohomish.....	First National Bank.....	W. O. Butler.....	L. L. Crosby.....	280,000	187,000	4,073,000	314,000	877,000
Garfield.....	Whitman.....	Garfield National Bank.....	G. W. Nye.....	L. P. Nelson.....	25,000	9,000	189,000	21,000	17,000
Harrington.....	Lincoln.....	First National Bank.....	Harry Ochs.....	W. W. Downie.....	80,000	21,000	662,000	31,000	74,000
Hillyard.....	Spokane.....	First National Bank.....	W. S. Brant.....	J. Farrow.....	25,000	7,000	261,000	.....	41,000
Hoquiam.....	Grays Harbor.....	First National Bank.....	W. L. Adams.....	A. G. Rockwell.....	100,000	170,000	2,005,000	.....	486,000
Kelso.....	Cowlitz.....	First National Bank.....	E. S. Oellins.....	O. C. Bashor.....	25,000	13,000	479,000	5,000	108,000
Kent.....	King.....	First National Bank.....	A. F. Morrill.....	D. T. Coleman.....	50,000	33,000	421,000	.....	95,000
Kennewick.....	Benton.....	First National Bank.....	L. E. Johnson.....	J. L. Johnson.....	50,000	12,000	445,000	84,000	100,000
Lind.....	Adams.....	First National Bank.....	H. E. Gritman.....	H. S. Sneed.....	35,000	17,000	447,000	.....	207,000
Medical Lake.....	Spokane.....	First National Bank.....	W. R. Cunningham, Jr.....	B. W. Hughes.....	25,000	12,000	291,000	17,000	42,000
Monroe.....	Snohomish.....	First National Bank.....	E. M. Stephens.....	Roy W. Jellison.....	25,000	9,000	250,000	.....	50,000
Monroe.....	Snohomish.....	Monroe National Bank.....	O. F. Elwell.....	W. H. Clark.....	25,000	2,000	127,000	.....	82,000
Montesano.....	Grays Harbor.....	Montesano National Bank.....	F. L. Carr.....	A. M. Campbell.....	25,000	6,000	151,000	.....	36,000
Mt. Vernon.....	Skagit.....	First National Bank.....	N. J. Moldstad.....	R. G. Hannaford.....	50,600	61,000	1,110,000	116,000	408,000
Mt. Vernon.....	Skagit.....	Mt. Vernon National Bank.....	O. Gunderson.....	B. L. Davis.....	50,000	6,000	506,000	8,000	94,000
Oakesdale.....	Whitman.....	National Bank of Oakesdale.....	F. A. Davis.....	J. Weston Martin.....	25,000	11,000	229,000	.....	57,000
Okanogan.....	Okanogan.....	First National Bank.....	C. E. Hanson.....	Harry J. Kerr.....	25,000	6,000	287,000	.....	40,000

DIRECTORY OF NATIONAL BANKS OF THE STATE OF WASHINGTON.—Continued.

Town	County	NAME OF BANK	President	Cashier	Capital Stock	Surplus Undivided Profits	Time and Demand Deposits	Due to Banks and Other Liabilities	Due from Banks, Cash and Exchange
Olympia.....	Thurston.....	Capital National Bank.....	C. J. Lord.....	W. J. Foster.....	\$100,000	\$200,000	\$2,199,000	\$73,000	\$1,028,000
Olympia.....	Thurston.....	Olympia National Bank.....	P. M. Troy.....	F. M. Kenney.....	50,000	98,000	788,000	.....	223,000
Oroville.....	Okanogan.....	First National Bank.....	A. P. Murray.....	D. B. Starrett, Jr.....	50,000	13,000	231,000	.....	47,000
Pakouise.....	Whitman.....	National Bank of Palouse.....	R. O. McCroskey.....	O. F. Kinkle.....	50,000	10,000	338,000	.....	188,000
Pasco.....	Franklin.....	First National Bank.....	Robert Jahne.....	T. J. Cooper.....	50,000	30,000	467,000	20,000	168,000
Port Angeles..	Clallam.....	Citizen's National Bank.....	G. M. Lauridsen.....	J. C. Christensen..	25,000	14,000	431,000	.....	151,000
Port Townsend	Jefferson.....	First National Bank.....	H. D. Hopkins.....	Jas. G. McCurdy..	50,000	47,000	480,000	.....	94,000
Pullman.....	Whitman.....	First National Bank.....	M. W. Whitlow.....	F. O. Forrest.....	75,000	43,000	767,000	42,000	174,000
Reardan.....	Lincoln.....	Beardan National Bank.....	H. G. Burns.....	E. A. Davidson.....	50,000	27,000	710,000	4,000	98,000
Ritzville.....	Adams.....	First National Bank.....	F. E. Robbins.....	F. H. Haupt.....	75,000	56,000	705,000	13,000	92,000
Ritzville.....	Adams.....	Pioneer National Bank.....	O. H. Greene.....	W. H. Martin.....	75,000	68,000	776,000	66,000	217,000
Reasalia.....	Whitman.....	Whitman County National Bank.....	W. E. Dwyer.....	F. J. Wilmer.....	40,000	28,000	734,000	17,000	290,000
Seattle.....	King.....	Dexter-Horton National Bank...	N. H. Latimer.....	C. E. Burnsides.....	1,200,000	360,000	9,580,000	2,750,000	4,860,000
Seattle.....	King.....	First National Bank.....	M. A. Arnold.....	O. A. Philbrick.....	400,000	372,000	7,375,000	1,697,000	3,215,000
Seattle.....	King.....	National Bank of Commerce.....	M. F. Backus.....	R. S. Walker.....	1,000,000	324,000	13,325,000	3,582,000	5,138,000
Seattle.....	King.....	National City Bank.....	J. W. Maxwell.....	N. H. Sell.....	500,000	238,000	3,784,000	765,000	974,000
Seattle.....	King.....	Seattle National Bank.....	F. K. Struve.....	H. C. MacDonald..	1,000,000	386,000	17,681,000	3,984,000	6,168,000
Sedro Woolley	Skagit.....	First National Bank.....	J. C. Wiksen.....	J. Guddall.....	25,000	11,000	387,000	.....	100,000
Snohomish....	Snohomish....	First National Bank.....	H. C. Connegys....	W. M. Snyder.....	50,000	72,000	706,000	1,000	168,000
Spokane.....	Spokane.....	Exchange National Bank.....	E. T. Coman.....	C. E. McBroom....	1,000,000	343,000	7,529,000	3,286,000	2,486,000

DIRECTORY OF NATIONAL BANKS OF THE STATE OF WASHINGTON—Continued.

Town	County	NAME OF BANK	President	Cashier	Capital Stock	Surplus and Undivided Profits	Time and Demand Deposits	Due to Banks and Other Liabilities	Due from Banks, Cash and Exchange
Spokane.....	Spokane.....	Fidelity National Bank.....	T. H. Brewer.....	J. J. Rouse.....	\$250,000	\$88,000	\$2,746,000	\$1,644,000	\$1,100,000
Spokane.....	Spokane.....	Old National Bank.....	D. W. Twoby.....	J. A. Yeomans.....	1,200,000	607,000	14,384,000	3,232,000	3,140,000
Sunnyside.....	Yakima.....	First National Bank.....	O. K. Strick.....	H. A. Boose.....	50,000	9,000	305,000	.....	75,000
Tacoma.....	Pierce.....	National Bank of Tacoma.....	Ralph S. Stacy.....	Stephen Appleby.....	1,000,000	229,000	10,978,000	993,000	4,033,000
Tonasket.....	Okanogan.....	First National Bank.....	Hans Lund.....	A. Lund.....	25,000	12,000	161,000	10,000	27,000
Toppenish.....	Yakima.....	First National Bank.....	F. A. Williams.....	L. J. Goodrich.....	25,000	26,000	946,000	.....	106,000
Vancouver.....	Clarke.....	U. S. National Bank.....	J. M. Langsdorf.....	J. S. G. Langsdorf.....	100,000	31,000	738,000	6,000	229,000
Vancouver.....	Clarke.....	Vancouver National Bank.....	Roy Heselstine.....	J. M. Denny.....	100,000	31,000	1,046,000	20,000	213,000
Waitsburg.....	Walla Walla.....	First National Bank.....	J. W. Morgan.....	W. G. Shuham.....	50,000	80,000	1,044,000	7,000	222,000
Walla Walla.....	Walla Walla.....	Baker-Boyer National Bank.....	Miles C. Moore.....	H. H. Turner.....	100,000	244,000	2,211,000	137,000	480,000
Walla Walla.....	Walla Walla.....	First National Bank.....	Levi Ankeny.....	P. M. Winans.....	200,000	345,000	2,029,000	64,000	728,000
Walla Walla.....	Walla Walla.....	Third National Bank.....	Geo. E. Kellough.....	Fred W. Wilson.....	100,000	54,000	1,064,000	19,000	221,000
Wapato.....	Yakima.....	First National Bank.....	Alex E. McCredy.....	L. W. Taylor.....	25,000	8,000	472,000	.....	231,000
Washburn.....	Adams.....	First National Bank.....	W. R. Cunningham, Jr.....	Wm. A. Pearce.....	50,000	15,000	297,000	.....	88,000
Wenatchee.....	Ochelan.....	First National Bank.....	J. K. McCormack.....	L. L. Mathews.....	50,000	22,000	885,000	8,000	585,000
Yakima.....	Yakima.....	First National Bank.....	W. L. Steinweg.....	O. E. Donovan.....	100,000	191,000	2,904,000	138,000	654,000
Yakima.....	Yakima.....	Yakima National Bank.....	George Donald.....	F. Bartholet.....	50,000	247,000	2,190,000	247,000	1,115,000
Zillah.....	Yakima.....	First National Bank.....	J. D. Cornett.....	L. H. Kuhn.....	25,000	14,000	283,000	.....	75,000

TWELFTH ANNUAL REPORT
OF THE
State Bank Examiner
OF THE
STATE OF WASHINGTON



DECEMBER 31, 1918

BY
LOUIS H. MOORE
State Bank Examiner

OLYMPIA, WASH.
FRANK M. LAMBORN  PUBLIC PRINTER
1919

ROSTER OF THE BANKING DEPARTMENT.

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FRANCES BREWSTER, <i>Stenographer</i>	Olympia
BONNIE MUSGROVE, <i>Clerk</i>	Olympia

STATE BANKING DEPARTMENT.
STATE OF WASHINGTON.

OLYMPIA, WASH., December 31, 1918.

Honorable Ernest Lister, Governor of the State of Washington, Olympia:

SIR: In accordance with section thirteen (13), chapter eighty (80), of the Session Laws of the State of Washington for 1917, I have the honor to submit herewith the Twelfth Annual Report of this department, which exhibits the condition of two hundred seventy-four (274) state banks and trust companies and eight (8) trust companies not acting in a banking capacity, operating in this state at the close of business at date of last call, November 1, 1918.

TWELFTH ANNUAL REPORT OF THE STATE BANK EXAMINER

GENERAL CONDITIONS.

The condition of Washington banks and trust companies, as shown by an analysis of the statements submitted in this report, is quite satisfactory. Deposits in both State and National banks have increased steadily during the year 1918 and on November 1st, the date of the last official call for reports, showed an increase over the deposits held on November 20th, 1917, of \$32,627,502.22. Of this amount the State banks and trust companies increased \$20,747,502.22 and the National banks increased \$11,880,000.00. The deposits in State banks and trust companies on November 1st, 1918, were \$176,066,154.44 and the deposits held by the National banks on the same date aggregated \$180,399,000.00.

Taking into consideration that the residents and business interests of the State of Washington subscribed to a total of \$113,097,600.00 of Liberty Loan Bonds of the third and fourth issues, \$26,000,000.00 of War Savings Stamps, and the additional fact that large amounts have been subscribed to the Red Cross, Y. M. C. A., Knights of Columbus and other kindred organizations engaged in war relief work, the large increase of deposits in the banks takes on a special significance. The absorption of this stupendous amount of Government securities taken together with the increase of bank deposits shown certainly reflects a prosperous general condition existing in this state.

Due to the abnormal activity in the lumber business, shipbuilding, and other war industries incident to the Pacific Coast, the banks located on the western slope of the Cascade Mountains have enjoyed a large and profitable business during the year 1918.

In central Washington the fruit crops were especially good the past year and the prices high. The banks have prospered as a natural result. Conditions in central Washington are probably better just at this time than ever before.

To balance, in part at least, the increase of business on the west side of the Mountains, the eastern part of the State produced only approximately fifty per cent (50%) of a normal wheat crop in 1918. Had the present high prices for all agriculture products not prevailed that section would have suffered a severe set back. The present prospects are that a large number of eastern Washington banks will find it necessary to carry a larger proportion of their borrowing customers over into next season than they have had to do in recent years.

On the whole the banks of Washington have had a very satisfactory and prosperous year in 1918 and should the year 1919 prove a normal year for the wheat and fruit producing sections of the State, and the present outlook is favorable, continued prosperity for the whole State would seem to be assured.

GENERAL BUSINESS ACTIVITY SHOWN.

It will be noted on the statement, showing the comparative condition of State banks at the close of business November 1st, 1918, with the condition shown November 20th, 1917, which is included herein and made a part of this report, that greater business activity in this State in 1918 is indicated by the increase of commercial loans of more than \$14,000,000.00, the increase of bills-payable of \$1,472,000.00 and added re-discounts of \$2,302,000.00. Like conditions are reflected by the comparative statement of national banks also shown herein.

CONDITIONS OF BANKS IMPROVED.

It is particularly gratifying to call attention here to the following table showing increases and decreases, during the past year, of certain items carried as resources by the banks under the supervision of this department:

INCREASES.

Commercial and real estate loans.....	\$13,190,987 14
Bonds and warrants.....	8,301,345 26
Due from banks.....	579,851 14
Exchanges for clearing house.....	396,602 64
Checks and other cash items.....	53,451 20
Total.....	\$22,522,237 38

DECREASES.

Banking house	\$369,256 82
Other real estate owned.....	427,011 84
Other resources	487,428 38
Total.....	\$1,283,697 04

The addition of \$22,522,237.38 of assets which are generally presumed to be of a liquid character and the reduction of \$1,283,697.04 of assets usually classified as being non-liquid indicates an improved condition existing in the banks.

CHANGES IN BANKING FACILITIES.

The following table shows the changes in banking facilities during the year 1918:

INCREASES IN CAPITAL STOCK OF STATE BANKS.

Thirteen State banks increased capital stock, total increase	\$272,000 00
Two new State banks, new capital.....	75,000 00
Total increase.....	\$347,000 00

DECREASES IN CAPITAL STOCK OF STATE BANKS.

Two State banks consolidated with other State banks, capital	\$35,000 00
Two State banks nationalized, capital.....	240,000 00
One former trust company dropped from the records of the banking department, capital	500,000 00
Total decrease	\$775,000 00
Less increase	347,000 00
Net decrease State banks.....	\$428,000 00

INCREASE IN CAPITAL STOCK OF NATIONAL BANKS.

One new National bank, capital.....	\$25,000 00
Two State banks converted into National banks, capital	240,000 00
Increase in capital of other National banks....	210,000 00
Total increase	\$475,000 00
 Increased capital of National banks....	 \$475,000 00
Less decrease capital of State banks...	428,000 00
Net increase of capital all banks.....	\$47,000 00

Detailed information showing the above changes in State banks will be found elsewhere in this report.

WASHINGTON'S PART IN GOVERNMENT WAR FINANCING.

During the year 1918 the State of Washington responded to every demand made upon it by the Government, for the financing of the war, in a most liberal and creditable manner.

The following table, showing the total subscriptions, in this State, to the four issues of Liberty Loan Bonds, is available through the courtesy of Mr. Joseph A. Swalwell, Chairman of the State Liberty Loan Committee:

	<i>Quota.</i>	<i>Subscriptions.</i>	<i>Subscribers. Number of</i>
First Loan, 1917....		*\$22,000,000 00	.....
Second Loan, 1917... \$32,542,136 00		41,413,200 00	.....
Third Loan, 1918.... 29,357,827 00		42,907,950 00	262,956
Fourth Loan, 1918... 58,216,000 00		70,189,650 00	407,511
Total.....		\$176,510,800 00	

* Approximate. Exact figures not available.

In addition to this amazing amount of Liberty Loan Bonds Mr. Daniel Kelleher, Director of War Savings Stamp Sales for Washington, reports the total of "Baby Bonds" sold in 1918 to be \$26,000,000.00. Mr. Kelleher is the author of the statement that on December 31st, 1918, there were only seven states ahead of Washington in their pro rata sales of War Savings Stamps.

Through the courtesy of Mr. D. H. Moss, Chairman of the Washington State Committee on the Sale of United States Certificates of Indebtedness, the following figures are available showing the quotas assigned and the total subscriptions made in this State to Treasury Certificates in anticipation of the Fourth Liberty Loan:

Minimum quota	\$40,488,000 00
Subscriptions	55,258,000 00
Excess subscribed	14,770,000 00

These subscriptions represent 136.48 per cent of the quotas assigned and in this respect the State of Washington heads the list of seven states and two territories comprising the Twelfth Federal Reserve District. A record it has held throughout 1918. Mr. Moss states that the subscriptions of all banks in Washington to the two issues of Treasury Certificates of December 5th and 19th will aggregate approximately 180% of the State's quota.

WAR ACTIVITIES OF BANKS AND BANKERS.

It is considered fitting that some commendatory mention be made herein of the very effective part taken by the bankers of this State in the many phases of war work during the past two years.

When it seemed to be against their own individual business interests the bankers were practically unanimous in urging the purchase of Liberty Loan Bonds and War Savings Stamps by their customers. In the same spirit of unselfishness the bankers were the leading factors in every community of the State in soliciting large subscriptions to all war relief causes. Their participation in these interests not only required a large part of their time and attention, with the resultant effect that their own private businesses suffered, but in many cases it was done at a considerable expense to the banks. Many of the larger banks found it imperative that a special department be added to take care of this additional work and that additional clerks be employed for that purpose.

The enviable position which the State of Washington has attained by the over-subscription to all demands made upon it for the purposes of financing the War will remain on record as a lasting monument to the patriotism of the bankers of this State.

THE WASHINGTON BANK DEPOSITORS' GUARANTY FUND.

The Guaranty Fund Act was passed by the Legislature in 1917. The Guaranty Fund Board, consisting of the Governor, ex-officio Chairman; the State Bank Examiner, ex-officio Secretary; Mr. R. L. Rutter, President of the Spokane & Eastern Trust Co. of Spokane; Mr. J. P. Duke, Cashier of the Security State Bank of Palouse, and Mr. J. E. Chilberg, President of the Scandinavian American Bank of Seattle, held its first meeting on June 29, 1917.

During the first six months of the operation of the Fund forty-six banks and three branch banks joined the system. During the year 1918 thirty-nine banks and two branch banks became members, making a total membership on December 31st, 1918, of eighty-five banks and five branch banks. In addition to these the applications of four other banks have been approved by the Board and upon making their deposits of cash and securities with the Board will become members.

The one year and six months of operation of the Guaranty Fund has demonstrated that the benefits resulting to the banks participating in the system are considerable and its success is entirely assured. From a dollars and cents standpoint it is firmly believed that the increased earnings accruing to the banks as a direct result of the increase of business because of membership in the Fund will more than balance any expense connected with it.

A list of the member banks of the Guaranty Fund and a summary of their reports of condition at the close of business November 1st, 1918, are included in this report.

FEDERAL RESERVE SYSTEM.

Twenty-eight State banks in Washington are now members of the Federal Reserve System, an increase of fourteen banks during the year 1918. The State of Washington leads the six other States of the Twelfth

Federal Reserve District in point of number of State Bank members of the system.

The Federal Reserve System demonstrated in a very forcible manner its usefulness under the war conditions prevailing the past two years and it is only reasonable to presuppose that its operations will continue to be of like benefit in the re-adjustment period which we are now entering upon.

The educational campaign, carried on by the Federal Reserve Banks among the member banks of the system, in their advocacy of the liquifying of loans so as to make them re-discountable with the parent banks, and the results obtained, will be of lasting benefit to all banks.

This department recommends the question of membership in the Federal Reserve System to all eligible State banks for their most earnest consideration.

BANKING LEGISLATION.

The 1917 Legislature enacted an entirely new banking code containing many provisions which have had a very beneficial effect upon banking in this State. Among these the following provisions have proven the most effective:

For levying assessments on capital stock by the State Banking Department to make good any impairment.

For eliminating incompetent, dishonest or reckless bank officials.

For limiting loans to any one person, firm or corporation, to 20% of capital and surplus, except upon security having an ascertained market value and a margin of value of at least 15% of the loan.

For monthly meetings of the boards of directors.

That all loans to officers, directors and employes be properly authorized by the board of directors.

That all active officers and employes furnish suitable surety bonds.

That any debt due a bank or trust company upon which interest is one year or more past due and unpaid, unless such debt be well secured and in process of collection, shall be considered a bad debt, and shall be charged off the books.

The observation and experience of this department has acquainted us with certain ills now existing in the banking business in this State and we are prompted to recommend the enactment into law of the following curative amendments:

Providing: That the book value of Other Real Estate Owned be not increased in any manner above the first cost of acquiring good merchantable title.

That the taking of a bonus, commission or gratuity of any kind by an officer, director, employee or stockholder of a bank or trust company for a loan made of funds of the corporation constitute the commission of a felony.

A time limit for carrying "final" judgments as assets.

A penalty for loaning funds while the reserves are depleted below the requirements of the law.

A prohibition against the investment by banks and trust companies in stocks of any description for their own account and setting a time limit for carrying, as assets, stocks taken in satisfaction of debt.

That the State Banking Department may assume charge of the management of institutions under its supervision without closing them and provide for the payment of all expenses incident to such action by the institution involved. Limiting such expense to \$25.00 per day for each person employed in this manner by the department.

That no assets acquired can be carried at more than the actual cost.

To lessen the stringency now placed by law upon trust companies in regard to advertising their legal functions.

These suggestions for amendments to the existing laws are offered without comment, other than that it is the firm belief of this department that these additions would further safeguard the funds of the depositors in the banks and trust companies in this State.

BANKS IN LIQUIDATION.

At the present time this department has charge of six banks for liquidation. Due to the large amount of litigation in connection with their affairs these liquidations are necessarily very slow. Every effort is being made to realize upon the assets of these banks and pay the creditors. Separate reports for each bank under liquidation, showing the progress made up to the dates shown, are included herewith.

Appended to and made a part of this report are the following:

1. Statement of expenses and receipts for 1918.
2. Statement of condition of State banks and trust companies at close of business November 1st, 1918, compared with statement of November 20th, 1917.
3. Statement of condition of National banks at close of business on November 1st, 1918, compared with statement of November 20th, 1917.
4. Table showing balances due State banks and trust companies in Washington segregated as to: (a) Due from National banks outside of the State; (b) Due from National banks in this State; (c) Due from State banks outside of this State; (d) Due from State banks inside of this State, and (e) Due from sundry banks.
5. Statement of condition of Washington Mutual Savings Bank of Seattle November 1st, 1918.

6. Miscellaneous changes in banks under the supervision of this department.
7. List of member banks of the Washington Bank Depositor's Guaranty Fund.
8. Statement showing resources and liabilities of member banks of the Washington Bank Depositor's Guaranty Fund at the close of business on November 1st, 1918.
9. List of Washington state banks members of the Federal Reserve System.
10. Abstract showing condition of State banks at the close of business on March 4th, May 10th, June 29th, August 31st, and November 1st, 1918.
11. Statement showing resources and liabilities of State banks on November 1st, 1918, by counties.
12. Statements showing conditions of banks in hands of this department for liquidation.
13. Directory of State banks and trust companies alphabetically arranged as to cities and towns.
14. Directory of National banks alphabetically arranged as to cities and towns.

In submitting this report I desire to acknowledge the courtesy of the Federal Reserve Bank of San Francisco in supplying the data regarding National banks of this State used herein.

Respectfully submitted,

LOUIS H. MOORE,

State Bank Examiner.

EXPENSES AND RECEIPTS.

Expenses from January 1, 1918, to December 31, 1918, inclusive, consist of the following:

Salaries	\$17,173 94
Traveling, office and other expenses.....	7,476 43

Total expenses of department.....	\$24,650 37
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Receipts of the department from January 1, 1918, to December 31, 1918, inclusive, are as follows:

Fees for examinations.....	\$20,524 90
Miscellaneous receipts, fines assessed, etc.....	750 00

Total receipts of department.....	\$21,274 90
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CONDITION OF STATE BANKS.

Statement Showing Condition of 274 State Banks and 8 Trust Companies at Close of Business November 1, 1918, Compared With That of November 20, 1917.

RESOURCES	November 20, 1917	November 1, 1918	Increases	Decreases
Loans on real estate.....	\$16,003,403 85	\$15,156,053 44		\$847,350 51
Other loans and discounts.....	78,135,739 76	92,174,077 41	\$14,038,337 65	
Overdrafts.....	164,952 80	195,012 05	30,059 25	
Bonds and warrants.....	26,586,883 94	34,988,239 20	8,401,355 26	
Stocks and other securities.....	3,737,500 30	4,999,975 77	1,262,475 47	
Banking house.....	5,228,126 60	4,858,869 87		369,256 82
Furniture and fixtures.....	1,026,307 49	1,129,004 36	102,696 87	
Other real estate owned.....	4,370,567 85	3,943,556 01		427,011 84
Due from banks approved reserve agents	27,208,057 90	27,038,781 50		169,276 40
Due from other banks.....	1,691,839 51	2,435,967 05	744,127 54	
Checks and cash items.....	706,671 62	760,122 82	53,451 20	
Exchange for clearing house.....	1,089,743 96	1,486,346 60	396,602 64	
Cash on hand.....	7,558,599 91	6,093,291 74		1,465,308 17
Deposited with Guaranty Board.....	134,158 26	298,686 01	164,527 75	
Expenses.....	2,245,746 98	2,508,102 49	262,355 51	
Other resources.....	1,643,525 69	1,156,097 31		487,428 38
Total Resources	\$177,526,836 61	\$199,122,183 63	\$21,595,347 14	\$3,760,632 12
Net Increase			\$21,595,347 14	
LIABILITIES				
Capital stock.....	\$15,368,700 00	\$15,368,700 00		\$445,000 00
Surplus.....	4,774,346 61	4,824,654 85	\$50,308 24	
Dividends profits.....	4,840,412 82	5,006,045 77	165,632 95	
Dividends unpaid.....	36,616 57	25,729 47		10,887 10
Due to banks.....	10,253,787 42	10,324,743 79	70,956 37	
City, county and state deposits.....	9,555,976 41	11,223,542 34	1,667,565 93	
Postal savings deposits.....	1,686,890 75	1,230,191 37		456,699 38
Deposits subject to check.....	63,906,649 56	73,749,877 78	9,843,228 22	
Demand certificates.....	2,441,558 66	2,842,877 38	401,318 72	
Cashier's checks.....	1,363,442 03	1,435,770 19	72,328 16	
Time certificates.....	15,632,750 54	15,147,776 77		484,973 77
Savings deposits.....	43,340,446 14	50,774,52 44	7,434,076 30	
Certified checks.....	221,588 03	211,540 64		10,047 39
Trust funds.....	2,177,777 50	49,777 57		2,128,000 00
Letters of credit.....	718,666 34	2,827,768 83	2,109,102 49	
Refusals.....	648,484 27	2,697,774 70	2,049,290 43	
Notes payable.....	117,777 46	2,188,077 00	2,070,299 54	
Other liabilities.....	2,555,477 45	692,730 36		1,862,747 09
Total Liabilities	\$177,526,836 61	\$199,122,183 63	\$21,595,347 14	\$3,760,632 12
Net Increase			\$21,595,347 14	

NOTE—

The above statements do not include the resources and liabilities of the Washington Mutual Savings Bank of Seattle, the totals of which were

December 31, 1917.....\$1,745,656 79
November 1, 1918.....\$1,294,355 56

Average reserve November 1, 1917.....\$1,294,355 56
Average reserve November 1, 1918.....\$1,294,355 56

Decrease Reserve.....\$1,294,355 56

Increase deposits.....\$1,294,355 56

Increase deposits of Washington

Mutual Savings Bank.....\$1,294,355 56

Total Increase Deposits.....\$1,294,355 56

CONDITION OF NATIONAL BANKS.

Combined Condition of Eighty-One (81) National Banks in the State of Washington at the Close of Business November 1, 1918, Compared With Seventy-Eight Banks at Close of Business November 20, 1917.

RESOURCES	November 20, 1917	November 1, 1918	Increases	Decreases
Cash and exchange.....	\$47,332,000 00	\$49,072,000 00	\$1,740,000 00	
Redscounts		* 5,278,000 00		
Loans and discounts.....	96,599,000 00	107,487,000 00	10,888,000 00	
U. S. bonds, Liberties.....		7,677,000 00	8,796,000 00	
U. S. and other bonds and securities.....	44,703,000 00	45,822,000 00		
Customers' liability account "Acceptances" executed by banks.....	1,015,000 00			\$1,015,000 00
Customers' liability under letters of credit.....	1,484,000 00			1,484,000 00
Banking house and equipment.....	3,207,000 00	3,645,000 00	438,000 00	
Other real estate.....	1,458,000 00	1,343,000 00		115,000 00
Other resources	598,000 00	4,720,000 00	4,122,000 00	
Total Resources	\$196,396,000 00	\$219,766,000 00	\$25,984,000 00	\$2,614,000 00
Net Increase			\$23,370,000 00	
LIABILITIES				
Capital	\$11,810,000 00	\$12,285,000 00	\$475,000 00	
Surplus	4,355,000 00	4,796,000 00	441,000 00	
Undivided profits	3,018,000 00	2,777,000 00		\$241,000 00
Due to banks.....	23,448,000 00	21,421,000 00		2,027,000 00
Deposits—U. S.		8,863,000 00	15,545,000 00	
Deposits—Demand	96,205,000 00	103,387,000 00		
Deposits—Time	47,010,000 00	47,136,000 00	126,000 00	
Redscounts, Federal Reserve Bank.....		* 5,273,000 00		
Redscounts, not Federal Reserve Bank.....		* 5,000 00		
Money and bonds borrowed.....	1,005,000 00	9,439,000 00	8,434,000 00	
Acceptances	1,009,000 00	2,345,000 00	1,336,000 00	
Letters of credit.....	1,856,000 00	92,000 00		1,764,000 00
Circulation	6,680,000 00	6,785,000 00	106,000 00	
Other liabilities		940,000 00	940,000 00	
Total Liabilities	\$196,396,000 00	\$219,766,000 00	\$27,402,000 00	\$4,032,000 00
Net Increase			\$23,370,000 00	
Total Increase of Deposits.....			\$11,880,000 00	

* Figures not included in totals.

BALANCES DUE STATE BANKS AND TRUST COMPANIES IN WASHINGTON SEGREGATED.

	Nov. 20, 1917.	Nov. 1, 1918.
Due from National banks outside of the state.....	\$5,976,563 54	\$7,948,500 00
Due from National banks in the state.....	14,172,335 78	12,711,000 00
Total due from National banks.....	\$20,148,899 32	\$20,659,500 00
Due from State banks outside of the state.....	\$4,268,943 83	\$2,278,500 00
Due from State banks in the state.....	2,785,214 76	3,829,500 00
Total due from State banks.....	\$7,054,158 58	\$6,108,000 00
Due from sundry banks, including foreign countries.....	\$1,691,938 51	\$2,707,248 55
Total due from banks.....	\$28,894,897 41	\$28,474,748 55

**STATEMENT OF CONDITION OF THE WASHINGTON MUTUAL SAVINGS
BANK OF SEATTLE AT CLOSE OF BUSINESS NOVEMBER 1, 1918.**

RESOURCES.

First mortgages on improved city and farm property.....	\$5,758,222 87
Federal, state, municipal and other bonds and warrants.....	1,864,386 48
Cash on hand and in banks.....	444,498 60
Real estate owned.....	31,882 29
Real estate sold under contract.....	100,999 91
Furniture and fixtures.....	4,013 01
Total.....	\$8,204,003 16

LIABILITIES.

Deposits	\$7,855,563 49
Incompleted loans	38,664 82
Guaranty fund	145,254 05
Undivided profits	164,520 80
Total.....	\$8,204,003 16

BANKS AUTHORIZED DURING THE YEAR 1918.

NAME OF BANK	Location	Capital Stock
Farmers State Bank.....	Mansfield.....	\$25,000 00
American Security Bank.....	Vancouver.....	50,000 00

BANKS CLOSED.

NAME OF BANK	Location	Date
Langley State Bank*.....	Langley.....	Feb. 26, 1918

* Bank re-organized and re-opened.

BANKS CONSOLIDATED.

NAME OF BANK	Location	Consolidated With	Date
State Bank of Bellevue.....	Bellevue.....	Scandinavian American Bank, Seattle	Jan. 19, 1918
Commercial State Bank.....	Mansfield.....	Mansfield State Bank.....	Feb. 28, 1918

BANKS NATIONALIZED.

NAME OF BANK	Location	New Title	Date
Seaboard Bank	Seattle.....	Seaboard National Bank.....	Feb. 15, 1918
St. John State Bank.....	St. John.....	First National Bank of St. John.	Apr. 30, 1918

CHANGE OF TITLE.

From	To	Location
Field & Lease, Bankers.....	First Guaranty Bank.....	Centralia
Tolt State Bank.....	Snoqualmie Valley Bank.....	Tolt
German-American State Bank.....	American State Bank.....	Ritzville

INCREASE OF CAPITAL STOCK.

NAME OF BANK	Location	Increased From	To
Methow Valley Bank.....	Pateros.....	\$10,000 00	\$15,000 00
Farmers State Bank.....	St. John.....	20,000 00	25,000 00
Mansfield State Bank.....	Mansfield.....	25,000 00	50,000 00
Eltopia State Bank.....	Eltopia.....	10,000 00	15,000 00
Ferndale State Bank.....	Ferndale.....	15,000 00	17,000 00
Douglas County Bank.....	Waterville.....	30,000 00	100,000 00
Bridgeport State Bank.....	Bridgeport.....	15,000 00	25,000 00
Grandview State Bank.....	Grandview.....	10,000 00	20,000 00
King County State Bank.....	Seattle.....	30,000 00	50,000 00
Farmers State Bank.....	Uniontown.....	20,000 00	25,000 00
State Bank of Seattle.....	Seattle.....	100,000 00	200,000 00
Liberty Bay Bank.....	Poulsbo.....	10,000 00	25,000 00

DEPOSITORS' GUARANTY FUND BANKS.

Eighty-Five (85) State Banks and Five (5) Branch Banks Admitted to Membership in the Washington Bank Depositors' Guaranty Fund.

Almira	Almira State Bank
Almira	Farmers State Bank
Anacortes	Citizens State Bank
Auburn	Citizens State Bank
Ballard	Scandinavian American Bank
	(Branch of Scandinavian American Bank, Seattle)
Bothell	Bothell State Bank
Bremerton	Bremerton Trust & Savings Bank
Bremerton	Citizens Bank of Bremerton
Carnation	Snoqualmie Valley Bank
Cathlamet	Wahkiakum County Bank
Centerville	Farmers State Bank
Centralia	Farmers & Merchants Bank
Centralia	First Guaranty Bank
Charleston	State Bank of Charleston
Chesaw	Commercial Bank (Branch of Commercial Bank of Conconully)
Chelan	Miners & Merchants Bank
Colfax	Colfax State Bank
Colville	Bank of Colville
Conconully	Commercial Bank
Conway	State Bank of Conway
Coulee City	Coulee State Bank
Davenport	Lincoln County State Bank
Duvall	Duvall State Bank
East Stanwood	State Bank of East Stanwood
Ellensburg	Farmers Bank
Eltopia	Eltopia State Bank
Everett	Citizens Bank & Trust Company
Enumclaw	Peoples State Bank
Enumclaw	State Bank of Enumclaw
Ephrata	Grant County Bank
Fairfield	Bank of Fairfield
Friday Harbor	San Juan County Bank
Goldendale	State Bank of Goldendale
Harrington	Harrington State Bank
Hillyard	Hillyard State Bank
Hunters	Hunters Exchange Office (Branch of Lincoln County State Bank)
Issaquah	Issaquah State Bank
Kalama	Kalama State Bank
Kent	Kent State Bank
Kettle Falls	(Branch of Bank of Colville)
Kirkland	Kirkland State Bank
Kittitas	Kittitas State Bank
Krupp	Farmers Bank of Krupp
La Center	La Center State Bank
Leavenworth	Leavenworth State Bank
Molson	Molson State Bank
Moxee City	Moxee State Bank
Mt. Vernon	Skagit County Trust & Savings Bank
Naches	Naches State Bank
Napavine	Napavine State Bank
Okanogan	Commercial Bank (Branch of Commercial Bank of Conconully)
Palouse	Security State Bank

Port Angeles	Bank of Clallam County
Port Angeles	Port Angeles Trust & Savings Bank
Port Orchard	Kitsap County Bank
Pullman	Pullman State Bank
Reardan	Farmers State Bank
Redmond	Redmond State Bank
Ritzville	American State Bank
Rockford	Farmers & Merchants Bank
Ruff	Ruff State Bank
Seattle	Guardian Trust & Savings Bank
Seattle	Scandinavian American Bank
Spangle	State Bank of Spangle
Spokane	Scandinavian American Bank
Spokane	Security State Bank
Spokane	Spokane & Eastern Trust Company
Spokane	Spokane State Bank
Spokane	Union Park Bank
Stevenson	Bank of Stevenson
St. John	Farmers State Bank
Sultan	Citizens Bank
Tenino	Citizens Bank
Twisp	Commercial Bank
Valleyford	Community State Bank
Vancouver	Washington Exchange Bank
Vashon	Vashon State Bank
Warden	Warden State Bank
Waterville	Douglas County Bank
Waterville	Waterville Savings Bank
Washougal	Clarke County Bank
Wenatchee	Commercial Bank & Trust Company
Wheeler	Wheeler State Bank
Wilbur	State Bank of Wilbur
Winthrop	Farmers State Bank
Withrow	Withrow State Bank
Woodland	Woodland State Bank
Yacolt	First State Bank
Yakima	Yakima Trust Company
Yakima	Yakima Valley Bank

RESOURCES AND LIABILITIES OF STATE BANKS.

**Total Resources and Liabilities of Eighty-Three (83) State Banks and Five
(5) Branch Banks Members of the Guaranty Fund at Close of Business
November 1, 1918.**

RESOURCES.

Loans on real estate.....	\$6,684,194 85
Other loans and discounts.....	32,297,074 53
Overdrafts	59,901 45
Bonds and warrants.....	10,970,992 35
Stocks and other securities.....	698,946 70
Banking house	989,409 34
Furniture and fixtures.....	300,046 08
Other real estate owned.....	873,170 11
Due from banks, approved reserve agents.....	7,539,771 42
Due from other banks.....	1,335,313 87
Checks and cash items.....	268,846 84
Exchanges for clearing house.....	540,781 59
Cash on hand.....	1,483,162 06
Deposited with Guaranty Board.....	* 208,686 01
Expenses	740,956 93
Other resources	666,629 54
Total resources	\$65,657,883 67

LIABILITIES.

Capital stock	\$4,620,000 00
Surplus	1,295,325 00
Undivided profits	1,350,634 11
Dividends unpaid	7,159 42
Due to banks.....	4,558,912 66
City, county and state deposits.....	3,094,689 68
Postal savings	215,969 77
Deposits subject to check.....	24,209,840 77
Demand certificates	747,659 26
Cashier's checks	606,302 00
Time certificates	4,990,867 95
Savings deposits	16,027,098 79
Certified checks	78,688 06
Trust funds	175,077 45
Letters of credit.....	383,618 59
Rediscounts	2,162,288 43
Bills payable	975,327 70
Other liabilities	158,423 03
Total liabilities	\$65,657,883 67

* Two banks not reporting cash deposited as assets should increase this total \$657.36.

At the close of business November 20, 1917, there were 37 State banks and 1 branch bank members of the Washington Depositors' Guaranty Fund, the total resources of which were \$43,547,808.51.

Since report of November 1st two additional banks have qualified and become members:

Bank of Fairfield, Fairfield—

Cash deposit....\$1,478.50 Resources....\$355,158.37

Farmers & Merchants Bank, Rockford—

Cash deposit.... \$945.30 Resources....\$269,541.65

STATE BANKS ADMITTED TO MEMBERSHIP IN FEDERAL RESERVE.

Albion State Bank.....	Albion
Almira State Bank.....	Almira
Centralla State Bank.....	Centralla
Coffman and Dobson Bank & Trust Co.....	Chehalis
First Savings & Trust Bank of Whitman County....	Colfax
Peoples State Bank.....	Enumclaw
Bank of Farmington.....	Farmington
Lumbermen's Bank	Hoquiam
First State Bank.....	La Crosse
Molson State Bank.....	Molson
Farmers & Merchants Bank.....	Odessa
Merchants Bank	Port Townsend
Farmers State Bank.....	Reardan
Bank of Rosalia.....	Rosalia
Dexter Horton Trust & Savings Bank.....	Seattle
Metropolitan Bank	Seattle
Scandinavian American Bank.....	Seattle
Northwestern State Bank.....	Bellingham
Bank of Stanwood.....	Stanwood
Farmers State Bank.....	St. John
Spokane & Eastern Trust Company.....	Spokane
Fidelity Trust Company.....	Tacoma
Citizens State Bank.....	Tekoa
Tekoa State Bank.....	Tekoa
Traders Bank	Toppenish
State Bank of Wilbur.....	Wilbur
Farmers Savings Bank.....	Walla Walla
Yakima Valley Bank.....	Yakima

ABSTRACT OF REPORTS OF CONDITION OF STATE BANKS IN WASHINGTON AT THE CLOSE OF BUSINESS ON THE DATES NAMED.

	March 4, 1918 272 State Banks, 9 Trust Companies	May 10, 1918 272 State Banks, 9 Trust Companies	June 29, 1918 272 State Banks, 9 Trust Companies	August 31, 1918 274 State Banks, 9 Trust Companies	November 1, 1918 274 State Banks, 8 Trust Companies
RESOURCES—					
Loans on real estate.....	\$15,004,290 17	\$14,588,725 84	\$14,224,713 97	\$15,141,400 58	\$15,156,053 44
Other loans and discounts.....	80,020,155 58	82,584,133 33	87,041,304 15	90,015,859 10	92,174,077 41
Overdrafts.....	174,082 64	178,069 41	404,159 62	292,430 97	185,012 05
Bonds and warrants.....	2,251,689 75	29,670,663 76	28,006,518 89	32,234,352 74	34,888,230 20
Stocks and other securities.....	4,040,670 77	4,420,276 14	3,990,586 66	3,710,049 74	4,009,975 77
Banking house.....	5,365,560 07	5,446,048 33	5,439,232 21	5,848,080 44	4,858,869 87
Furniture and fixtures.....	977,738 59	900,212 18	1,003,984 06	1,025,018 54	1,129,004 36
Other real estate owned.....	4,654,134 02	4,476,821 09	4,683,400 90	4,651,302 58	3,943,556 01
Due from banks approved reserve agents.....	25,552,450 82	24,126,616 24	22,420,692 06	25,301,142 43	27,038,751 50
Due from other banks.....	1,723,183 87	1,812,928 42	1,946,794 66	2,043,055 97	2,435,967 05
Checks and cash items.....	627,083 48	880,525 96	668,443 50	767,859 75	760,122 82
Exchanges for clearing house.....	1,513,081 45	1,221,160 29	1,597,629 95	1,369,224 62	1,486,346 60
Cash on hand.....	6,187,962 30	6,316,542 13	5,812,901 93	5,313,704 89	6,093,291 74
Deposited with Guaranty Fund.....	187,602 21	188,143 32	195,768 24	209,300 68	208,686 01
Expenses.....	836,016 45	1,583,446 06	1,372,992 15	2,011,093 81	2,508,102 40
Other resources.....	445,742 29	473,583 49	772,154 03	1,002,562 47	1,156,697 31
Totals.....	\$175,557,843 46	\$178,875,934 99	\$180,481,277 80	\$190,877,357 40	\$190,122,183 63
LIABILITIES—					
Capital stock.....	\$15,551,700 00	\$15,543,700 00	\$15,633,700 00	\$15,683,700 00	\$15,208,700 00
Surplus.....	4,946,725 52	4,937,347 06	4,964,139 22	5,010,696 23	4,804,654 85
Undivided profits.....	2,429,044 46	3,381,354 76	2,941,650 16	3,730,072 08	5,006,645 77
Dividends unpaid.....	34,492 12	29,762 61	92,820 05	31,654 65	28,739 47
Due to banks.....	7,864,978 22	7,165,060 41	7,105,201 21	8,238,683 61	10,384,783 79
City, county and state deposits.....	9,711,461 21	16,412,654 57	15,070,043 59	13,028,311 13	11,223,942 84
Postal savings deposits.....	1,555,831 33	1,021,637 84	1,008,136 61	1,180,428 62	1,230,191 37
Deposits subject to check.....	63,637,450 21	60,878,230 56	59,923,340 59	66,512,336 84	73,749,837 76
Demand certificates.....	2,813,319 26	2,701,491 39	2,612,478 10	2,731,806 54	2,802,267 38
Cashier's checks.....	1,573,106 90	1,009,696 88	1,534,325 37	1,012,360 80	1,458,759 19
Time certificates.....	15,810,061 51	15,205,732 60	14,823,926 63	15,012,200 83	15,147,716 77
Savings deposits.....	46,000,639 48	45,263,663 48	47,240,987 15	49,183,843 92	50,714,092 44
Certified checks.....	155,430 91	290,482 04	394,113 76	290,132 60	211,540 64
Trust funds.....	412,644 81	380,610 75	355,296 36	347,688 38	426,010 97
Letters of credit.....	459,555 51	229,709 35	643,243 62	882,630 60	832,708 83
Rediscouts.....	1,445,913 04	2,093,049 17	3,542,740 73	4,615,920 30	2,950,784 70
Bills payable.....	845,383 77	1,510,413 29	1,983,641 54	2,572,176 91	2,188,077 00
Other liabilities.....	309,470 20	754,386 13	551,523 20	921,773 36	662,730 36
Totals.....	\$175,557,843 46	\$178,875,934 99	\$180,481,277 80	\$190,877,357 40	\$190,122,183 63

STATEMENT OF CONDITION OF COWLITZ COUNTY BANK OF KALAMA, DECEMBER 31, 1918.
CLOSED JANUARY 4, 1916.

ASSETS	On Hand January 4, 1916	Additional Acquired and Converted From Other Assets	Interest, Income and Profits	Cash Collected	Offsets Allowed	Converted Into Claims and Judgments	Converted Into Other Assets	Ascertained Losses	Balance On Hand December 31, 1918
Loans and discounts.....	\$85,992 42	\$5,517 91	\$5,051 65	\$35,854 33	\$3,852 76	\$14,880 22	\$15,880 79	\$11,422 80	\$24,671 08
Overdrafts.....	6,311 68	1,600 00		1,025 86	635 99	5,902 07			347 67
Bonds and warrants.....	14,179 62	250 98	2,295 61	6,644 64	9,563 43				491 04
Bank building and furniture and fixtures.....	2,200 00		1,200 00	3,400 00					
Other real estate.....	700 00	19,927 54		1,065 00			1,100 00	3,249 91	15,212 63
Claims and judgments.....		20,798 46	89 26	7,071 35					13,816 37
Other resources.....		1,435 50	42 88	488 72	24 16			135 50	830 00
Due from banks.....	3,062 10	5,512 11	839 99	1,844 44	5,822 49		230 60	1,747 27	501 07
Checks and other cash items.....	1,814 13	740 55		740 55					
Cash.....	2,706 62			2,706 62					
Stock assessment.....		2,530 98	28 30	2,456 30			100 98		
Total Assets as shown by books at date of closing January 4, 1916.....	\$126,986 37	Total Cash Collected During Liquidation.....		\$63,297 80	Total.....	Cash on hand December 31, 1918.....			\$55,950 86
						Total Remaining Assets December 31, 1918.....			\$66,756 99
		DISTRIBUTION OF CASH—							
		Preferred claims paid.....		\$3,201 57	TOTAL—	Claims proved for dividends.....		\$103,162 16	
		Expended for preservation of assets.....		4,953 39	Claims proved, preferred and paid.....	Claims proved, preferred and paid.....		3,201 57	\$107,298 09
		Liquidation expense paid.....		8,273 72	Claims not proved.....	Claims not proved.....		914 86	
		Dividend paid, 35%.....		36,071 99	LESS—	Claims, preferred and secured, paid.....		\$3,201 57	
		Cash on hand December 31, 1918.....		10,797 13	Dividends paid.....	Dividends paid.....		36,071 99	30,273 56
		Total Cash Collected.....		\$63,297 80	LIABILITIES REMAINING—	Proved.....		\$67,080 17	\$67,994 53
					Not proved.....	Not proved.....		914 86	

STATEMENT OF CONDITION OF NORTHERN BANK AND TRUST COMPANY OF SEATTLE, DECEMBER 1, 1918.
CLOSED JANUARY 29, 1917.

ASSETS		On Hand January 20, 1917	Additional Acquired and Converted From Other Assets	Interest, Income and Profit:	Cash Collected	Offsets Allowed	Converted Into Claims and Judgments	Converted Into Other Assets	Ascertained Losses	Balance On Hand December 1, 1918
Loans and discounts.....	\$1,209,844 91		\$27,413 19		\$301,590 38	\$89,011 02		\$55,114 42	\$13,126 70	\$787,514 68
Overdrafts.....	34,987 18		7,973 40		12,614 02	3,756 71		625 76	16,085 71	9,383 47
Bonds and warrants.....	117,252 92		644 60		9,164 80					108,742 63
Furniture and fixtures.....	26,060 00				9,824 22					16,175 78
Other real estate.....	46,069 76		79,417 16		14,721 11			7,717 13		102,968 68
Stocks, securities, claims and judgments.....	216,338 14		113,397 00		307,761 28			12,717 86	9,200 00	17,280 00
Other resources.....	17,152 00		128 00							
Income.....				\$30,463 81	28,814 08	197 90		1,451 83		
Due from banks.....	38,171 45		8,240 63		31,202 23			4,207 56	10,000 00	1,002 29
Checks and other cash items.....	50,223 13		17,744 94		31,064 67	92 21		17,092 48		19,717 71
Cash.....	13,867 24				13,867 24					
Stock assessment.....			25,266 67		17,750 00	216 61		7,300 00		
							Total.....			\$1,003,280 24
Total Assets as shown by books at date of closing January 29, 1917.....	\$1,769,825 73		Total Cash Collected During Liquidation.....		\$778,364 12	Cash on hand December 1, 1918.....				233,076 11
						Total Remaining Assets December 1, 1918.....				\$1,296,856 35
			DISTRIBUTION OF CASH—			TOTAL—				
			Preferred claims paid.....		\$14,163 59	Claims proved for dividends.....		\$1,001,176 74		
			Secured claims paid and col- lateral redeemed.....		82,060 72	Claims proved, preferred and paid.....		15,463 59		
			Expended for preservation of assets.....		110,587 53	Claims not proved.....		23,956 09		\$1,640,568 42
			Liquidation expense paid.....		43,572 02	LESS—				
			Dividend paid, 20%.....		287,086 22	Claims, preferred and secured, paid.....			\$15,463 59	
			Transferred to trust.....		1,817 93	Dividends paid.....			287,086 22	302,549 81
			Cash on hand December 1, 1918.....		233,076 11	LIABILITIES REMAINING—				
						Proved.....		\$1,314,090 52		\$1,338,046 61
						Not proved.....		23,956 09		
			Total Cash Collected.....		\$778,364 12					

STATEMENT OF CONDITION OF GERMAN-AMERICAN MERCANTILE BANK OF SEATTLE, DECEMBER 31, 1918.
CLOSED JANUARY 31, 1917.

ASSETS	On Hand January 31, 1917	Additional Acquired and Converted From Other Assets	Interest, Income and Profits	Cash Collected	Offsets Allowed	Converted Into Claims and Judgments	Converted Into Other Assets	Ascertained Losses	Balance On Hand December 31, 1918
Loans and discounts.....	\$1,156,329 36	\$56,143 80	\$52,003 48	\$459,021 99	\$117,303 08	\$88,439 99	\$650 00	\$6,882 07	\$542,179 46
Overdrafts	6,727 69	.....	.....	1,333 15	271 61	.....	.....	5,132 98	.....
Bonds, warrants and stocks.....	138,276 69	.....	5,252 71	100,892 88	.....	.....	.....	.....	43,630 02
Furniture and fixtures.....	13,527 43	883 00	.....	5,135 50	.....	.....	.....	.....	8,391 91
Other real estate.....	55,895 76	27,823 49	2,864 51	4,388 31	.....	.....	15,670 00	2,424 23	63,606 22
Claims and judgments.....	68,741 51	106,924 81	.....	2,158 30	204 77	.....	.....	.....	173,303 25
Other resources	54,272 18	35,231 54	6 44	47,497 01	1,639 63	.....	23,821 47	10 36	16,541 69
Due from banks	20,808 28	35,580 78	5,709 45	42,853 99	1,853 57	.....	.....	.....	17,800 95
Checks and other cash items.....	11,747 19	.....	.....	2,775 61	8,870 59	.....	.....	.....	100 99
Cash	6,207 90	.....	.....	6,207 90	.....	.....	.....	.....	.....
Stock assessment .....	.....	30,628 12	2,685 08	31,829 29	.....	.....	.....	.....	.....
Total Assets as shown on books at date of closing January 31, 1917..	\$1,532,043 87	Total Cash Collected During Liquidation..	.....	\$733,033 43	Cash on hand December 31, 1918..	Total.....	.....	.....	\$365,644 49
						Total Remaining Assets December 31, 1918 .....	.....	.....	\$945,596 59
		DISTRIBUTION OF CASH—							
		Preferred claims paid.....	.....	\$483 45	TOTAL—	Claims proved for dividends..	.....	\$1,129,029 71	
		Secured claims paid and col- lateral redeemed .....	.....	.....	Claims proved, preferred and paid	Claims proved, preferred and Claims not proved.....	.....	483 45	
		Expended for preservation of assets .....	.....	115,980 66	Claims not proved.....	.....	.....	79,109 40	\$1,208,622 56
		Liquidation expenses paid.....	.....	51,794 32	LESS—	.....	.....	.....	
		Dividends paid, 45%.....	.....	41,845 84	Claims, preferred and secured, paid .....	.....	.....	\$483 45	
		Cash on hand December 31, 1918..	.....	442,987 06	Dividends paid .....	.....	.....	442,987 06	443,470 51
				79,952 10	LIABILITIES REMAINING—	.....	.....	.....	
		Total Cash Collected.....	.....	\$733,033 43	Proved .....	.....	.....	\$698,042 65	\$705,152 05
					Not proved .....	.....	.....	79,109 40	

STATEMENT OF CONDITION OF FREMONT STATE BANK OF SEATTLE, DECEMBER 31, 1918.

CLOSED JANUARY 31, 1917.

ASSETS	On Hand January 31, 1917	Additional Acquired and Converted From Other Assets	Interest, Income and Profits	Cash Collected	Offsets Allowed	Converted Into Claims and Judgments	Converted Into Other Assets	Ascertained Losses	Balance On Hand December 31, 1918
Loans and discounts.....	\$126,226 91	\$3,207 21	\$4,056 04	\$23,131 98	\$9,231 64		\$50,583 37	\$3,215 56	\$47,327 61
Overdrafts.....	31 40	13 46		31 40					13 46
Bonds, warrants and stocks.....	18,583 27	50 00		436 94	17,072 28				1,984 05
Furniture and fixtures.....	1,700 00			849 65					850 35
Other real estate.....	27,799 07	77,961 78	24,009 75	22,250 23	37 35		5,500 00	41,883 65	60,099 37
Other resources.....	28,315 05	2,434 65		5,068 97	97 49		\$1,343 15	3,282 55	937 54
Due from banks.....	6,471 35	5,513 79	70 57	6,705 35	5,218 75				131 61
Cheques and other cash items.....	421 15				227 17		76 98		117 00
Cash.....	2,984 42			2,984 42					
Total Assets shown on books at date of closing January 31, 1917.....	\$212,732 62	Total Cash Collected During Liquidation..		\$61,418 94		Total.....			\$110,880 99
						Cash on hand December 31, 1918..			12,086 26
						Total Assets Remaining December 31, 1918			\$122,947 25
		DISTRIBUTION OF CASH—							
		Preferred claims paid.....		\$672 59		TOTAL—		\$129,225 72	
		Expended for preservation of assets				Claims proved for dividends...		672 59	
		Liquidation expense paid.....		27,747 80		Claims proved, preferred and paid		3,415 51	\$133,313 83
		Dividend paid, 10%.....		7,984 22		Claims not proved.....			
		Cash on hand December 31, 1918..		12,918 07		LESS—			
		Total Cash Collected.....		12,086 26		Claims, preferred and secured, paid		\$672 59	
						Dividend paid		12,918 07	13,580 65
						LIABILITIES REMAINING—			
						Proved		\$116,307 65	
						Not proved		3,415 51	\$119,723 16

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 1, 1918.

Town	County	NAME OF BANK OR TRUST COMPANY	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Total Deposits	Total Resources
Aberdeen.....	Grays Harbor	Aberdeen State Bank.....	1907	G. L. Nyere.....	G. W. Ripley.....	\$25,000	\$14,387	\$395,000	\$457,197
Aberdeen.....	Grays Harbor	Hayes & Hayes, Bankers.....	1904	F. B. Patterson.....	W. J. Patterson.....	300,000	243,584	4,526,000	5,111,000
Albion.....	Whitman.....	Albion State Bank.....	1906	Geo. M. Miller.....	M. C. Handley.....	25,000	11,781	77,000	114,000
Almira.....	Lincoln.....	*Almira State Bank.....	1902	Jens Peterson.....	Julius C. Johnson..	50,000	42,302	455,000	547,000
Almira.....	Lincoln.....	*Farmers State Bank.....	1914	Fred H. Hyde.....	C. E. Allison.....	25,000	19,778	266,000	331,000
Anacortes.....	Skagit.....	Bank of Commerce.....	1905	Daniel Kelleher.....	Fred D. Oartwright..	25,000	9,066	446,000	485,000
Anacortes.....	Skagit.....	*Citizens Bank.....	1907	M. B. Mattice.....	W. J. Mattice.....	25,000	11,533	335,000	372,000
Anatone.....	Asotin.....	First Bank of Anatone.....	1907	D. A. McIntosh.....	John K. McIntosh..	10,000	2,763	54,000	67,000
Arlington.....	Snobomish..	Arlington State Bank.....	1900	C. E. Bingham.....	C. H. Tracy.....	25,000	9,468	404,000	439,000
Arlington.....	Snobomish..	Citizens State Bank.....	1907	J. B. Riley.....	L. C. Palmer.....	15,000	20,747	367,000	402,000
Asotin.....	Asotin.....	Bank of Asotin County.....	1904	Ben Ayers.....	J. B. Jones.....	25,000	14,776	178,000	218,000
Asotin.....	Asotin.....	Baumelster, Vollmer & Scott Bank	1914	E. Baumelster.....	E. Matthes.....	15,000	13,237	182,000	210,000
Auburn.....	King.....	*Citizens State Bank.....	1914	A. C. MacCallum.....	Stanley W. Brown..	50,000	16,748	208,000	275,000
Ballard.....	King.....	*Scandinavian American Bank (Branch of Union Savings & Trust Company, Seattle.)	.....	J. E. Chilberg.....	Otto S. J. Pederson..	.....	.....	.....	.....
Ballard.....	King.....	Union Savings & Trust Company. (Branch of Union Savings & Trust Company, Seattle.)	.....	Jos. A. Swallow.....	C. W. Casler, Mgr..	.....	.....	.....	.....
Battleground..	Clarke.....	Northwestern State Bank.....	1914	Fred Ellis.....	H. C. Cornell.....	10,000	2,944	59,000	72,000
Bellingham....	Whatcom....	Bank of Bickleton.....	1905	I. J. Adair.....	B. T. Drake.....	100,000	81,378	1,479,000	1,664,000
Bickleton.....	Klickitat....	State Bank of Black Diamond.....	1905	C. E. Flower.....	S. A. Rossler.....	25,000	21,867	305,000	352,000
Black Diamond	King.....	State Bank of Black Diamond.....	1914	Thomas Fourrier.....	M. E. Olson.....	12,000	5,711	82,000	101,000

* Member of Washington Bank Depositors Guaranty Fund.

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 1, 1918.—Continued.

Town	County	NAME OF BANK OR TRUST COMPANY	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Total Deposits	Total Resources
Blaine.....	Whatcom.....	Home State Bank.....	1905	Albert Still	O. K. Middleton.....	\$25,000	\$12,906	\$322,000	\$370,000
Bothell.....	King.....	*Bothell State Bank.....	1905	Gerh. Erickson	A. G. Worthington..	12,500	3,676	126,000	143,000
Bremerton.....	Kitsap.....	*Bremerton Trust & Savings Bank.....	1914	George E. Miller.....	Richard G. Cook....	25,000	15,956	591,000	683,000
Bremerton.....	Kitsap.....	*Citizens Bank	1909	S. Migliavacca	Ernest C. Ebert.....	50,000	17,295	566,000	633,000
Bridgeport.....	Douglas.....	Bridgeport State Bank.....	1906	Herman Cornsbl	T. J. East.....	25,000	14,674	153,000	194,000
Buckley.....	Pierce.....	State Bank of Buckley.....	1907	C. O. Steberg.....	A. O. Johnson.....	25,000	14,970	276,000	318,000
Cashmere.....	Chelan.....	Cashmere State Bank.....	1907	Guy C. Browne.....	George Sussex, Jr....	25,000	21,068	245,000	291,000
Cashmere.....	Chelan.....	Farmers & Merchants Bank.....	1906	John O. Lilly.....	C. D. Halferty, Jr..	25,000	23,482	363,000	494,000
Castle Rock.....	Cowlitz.....	The Castle Rock Bank.....	1904	J. A. Byerly.....	G. L. Buland.....	25,000	34,687	298,000	349,000
Cathlamet.....	Wahkiakum.....	*Wahkiakum County Bank.....	1909	Will T. Wright.....	Th. Fagstad	10,000	9,757	152,000	174,000
Centerville.....	Klickitat.....	*Farmers State Bank.....	1914	L. T. Gillett.....	J. C. Kaldera.....	15,000	7,805	131,000	156,000
Centralla.....	Lewis.....	Centralla State Bank.....	1915	W. J. Patterson.....	O. C. Spencer.....	100,000	32,485	359,000	492,000
Centralla.....	Lewis.....	*Farmers & Merchants Bank.....	1911	B. H. Rhodes.....	O. Paul Uhlmann....	75,000	44,505	870,000	989,000
Centralla.....	Lewis.....	*First Guaranty Bank.....	1903	J. E. Fitzgerald.....	Albert Smith	25,000	8,356	631,000	696,000
Charleston.....	Kitsap.....	*State Bank of Charleston.....	1914	F. J. Carver.....	A. E. Galbraith.....	15,000	11,625	112,000	139,000
Chehalis.....	Lewis.....	Coffman Dobson Bank & Trust Company.....	1904	N. B. Coffman.....	D. T. Coffman.....	150,000	130,756	4,411,000	1,992,000
Chehalis.....	Lewis.....	Security State Bank.....	1903	J. W. Alexander.....	W. J. Ford.....	25,000	33,561	528,000	598,000
Chelan.....	Chelan.....	*Miners & Merchants Bank.....	1907	J. A. Van Slyke.....	H. W. Van Slyke....	25,000	35,536	261,000	321,000
Chesaw.....	Okanogan.....	*Commercial Bank .....	.....	N. E. Whitworth.....	Paul Gerdes, Mgr....	.....	.....	.....	.....
		(Branch of Commercial Bank of Condonully.)							

* Member of Washington Bank Depositors Guaranty Fund.

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 1, 1918.—Continued.

Town	County	NAME OF BANK OR TRUST COMPANY	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Total Deposits	Total Resources
Chewelah.....	Stevens.....	Bank of Chewelah.....	1911	Thomas Bowers	H. L. Hillsborough..	\$15,000	\$11,887	\$112,000	\$154,000
Clarkston.....	Asotin.....	State Bank of Clarkston.....	1907	A. E. Clarke.....	Henry Elliott	15,000	4,805	120,000	140,000
Clear Lake.....	Skagit.....	First State Bank.....	1914	C. E. Bingham.....	Q. R. Bingham.....	10,000	2,856	69,000	84,000
Cle Elum.....	Kittitas.....	Ole Elum State Bank.....	1904	Frank Carpenter .....	.....	50,000	19,469	609,000	768,000
Colfax.....	Whitman.....	*Colfax State Bank.....	1908	J. J. Miller.....	R. F. Bigelow.....	60,000	23,017	240,000	337,000
Colfax.....	Whitman.....	First Savings & Trust Bank of Whitman County.	1905	Alfred Coolidge	H. G. DePledge.....	50,000	26,444	270,000	346,000
Colton.....	Whitman.....	Colton State Bank.....	1906	M. Schultheis, Jr.....	E. N. Snider.....	15,000	17,869	205,000	307,000
Colville.....	Stevens.....	*Bank of Colville.....	1900	G. W. Peddyoord.....	C. L. Baker.....	100,000	54,297	624,000	832,000
Colville.....	Stevens.....	Colville Loan & Trust Company..	1909	George W. Seal.....	I. J. Lasswell, Sec'y	25,000	4,942	220,000	290,000
Conconully.....	Okanogan.....	*Commercial Bank	1890	N. E. Whitworth.....	E. C. Quackenbush..	40,000	12,198	239,000	351,000
Concrete.....	Skagit.....	State Bank of Concrete.....	1914	L. A. O'Brien.....	W. J. McDonald.....	10,000	9,540	91,000	111,000
Connell.....	Franklin.....	Farmers State Bank.....	1915	C. E. Nelson.....	J. B. Helmick.....	10,000	12,697	111,000	176,000
Connell.....	Franklin.....	State Bank of Connell.....	1907	J. H. Schlomer.....	C. B. Unger.....	15,000	14,168	192,000	211,000
Conway.....	Skagit.....	*State Bank of Conway.....	1915	John S. Finstad.....	A. Garborg	10,000	5,701	147,000	163,000
Coulee City.....	Grant.....	*Coulee State Bank.....	1905	James Howell	M. H. Hancock.....	25,000	34,974	198,000	303,000
Coupeville.....	Island.....	Bank of Commerce..... (Branch of Bank of Commerce, Everett.)	.....	Daniel Kelleher	E. S. Bryan, Asst.....	.....	.....	.....	.....
Creston.....	Lincoln.....	Creston State Bank.....	1902	J. M. Dungan.....	C. E. Funthouser...	25,000	19,431	296,000	340,000
Custer.....	Whatcom.....	Custer State Bank.....	1914	C. R. Behme.....	A. F. Stone.....	10,000	3,549	83,000	97,000
Davenport.....	Lincoln.....	*Lincoln County State Bank.....	1901	J. W. Frye.....	Fred S. Wells.....	50,000	47,430	503,000	807,000
Deer Park.....	Spokane.....	First State Bank.....	1907	O. F. Kelly.....	F. P. Swan, Assistant Cashier.	25,000	10,164	191,000	227,000

* Member of Washington Bank Depositors Guaranty Fund.

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 1, 1918.—Continued.

Town	County	NAME OF BANK OR TRUST COMPANY	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Total Deposits	Total Resources
Duval	King	*Duval State Bank	1912	A. H. Boyd	Isadore V. Hall, Assistant Cashier.	\$15,000	\$9,522	\$107,000	\$132,000
East Stanwood	Snohomish	*State Bank of East Stanwood	1910	A. Garborg	O. R. Amundson	15,000	14,689	287,000	316,000
Eatonville	Pierce	Eatonville State Bank	1913	F. M. Roberts	N. J. Bruen	10,000	9,898	121,000	140,000
Edison	Skagit	Farmers & Merchants Bank	1908	J. K. Hannay	John Hannay, Jr.	12,000	10,529	148,000	170,000
Edmonds	Snohomish	State Bank of Edmonds	1907	L. W. Lewis	H. V. Allen	25,000	4,840	139,000	166,000
Edwall	Lincoln	Bank of Edwall	1902	J. K. McCornack	Ward Jesseph	25,000	21,023	211,000	257,000
Eberton	Whitman	Elberton State Bank	1909	J. M. Seagle	J. L. Montzheim	10,000	5,914	70,000	86,000
Ellensburg	Kittitas	*Farmers Bank	1905	R. Lee Barnes	J. C. Sterling	50,000	90,218	1,070,000	1,211,000
Elma	Grays Harbor	Bank of Elma	1907	A. D. Devonshire	E. L. France	15,000	19,883	388,000	423,000
Elma	Grays Harbor	Farmers & Lumbermen's Bank	1910	Henry McCleary	W. L. Boomer	20,000	10,713	254,000	285,000
Eltopia	Franklin	*Eltopia State Bank	1913	H. M. Owen	O. T. Grisinger	15,000	5,938	47,000	94,000
Endicott	Whitman	Bank of Endicott	1903	M. A. Sherman	M. A. Sherman, Jr.	25,000	18,625	279,000	322,000
Entiat	Chelan	Entiat State Bank	1914	Harmon Wilcox	J. G. Kennedy	10,000	4,453	60,000	74,000
Eumclaw	King	*Peoples State Bank	1910	B. R. Kibler	J. W. Davis	25,000	21,859	380,000	376,000
Eumclaw	King	*State Bank of Eumclaw	1904	S. Lafromboise	A. C. Johansen	30,000	21,915	398,000	450,000
Ephrata	Grant	*Grant County Bank	1912	E. C. Davis	J. T. Wilkins	15,000	14,299	168,000	210,000
Everett	Snohomish	Bank of Commerce	1900	Daniel Kelleher	E. O. Olson	100,000	34,526	1,558,000	1,207,000
Everett	Snohomish	Bank of Commerce		Daniel Kelleher	Harry D. Love, Assistant Cashier.				
Everett	Snohomish	*Citizens Bank & Trust Company, (Fine Street Branch.)	1912	N. L. Thompson	Frank L. Cooper	100,000	13,718	642,000	777,000
Everett	Snohomish	Everett Trust & Savings Bank	1902	Wm. O. Butler	J. W. Clark	25,000	40,047	529,000	595,000

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DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 1, 1918.—Continued.

Town	County	NAME OF BANK OR TRUST COMPANY	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Total Deposits	Total Resources
Everson.....	Whatcom.....	Nooksack Valley State Bank.....	1906	Ben Bollerud	Henry P. Johnson..	\$15,000	\$12,367	\$105,000	\$138,000
Fairfield.....	Spokane.....	*Bank of Fairfield.....	1908	Henry Treede	O. E. Moss.....	12,000	19,541	323,000	855,000
Farmington...	Whitman.....	Bank of Farmington.....	1887	Alfred Coolidge	W. Claude Renfrew.	25,000	16,238	203,000	245,000
Ferndale.....	Whatcom.....	Ferndale State Bank.....	1904	H. E. Campbell.....	Percy Hood	17,000	23,258	276,000	315,000
Friday Harbor	San Juan.....	*San Juan County Bank.....	1883	W. H. Pringle.....	Van E. Sargent.....	35,000	20,207	412,000	467,000
Garfield.....	Whitman.....	First State Bank.....	1902	R. A. Johnson.....	I. M. McCarthy.....	50,000	33,517	331,000	494,000
Goldendale....	Klickitat.....	Brooks & Co. Bank.....	1914	N. B. Brooks.....	A. E. Ooley.....	25,000	24,687	383,000	433,000
Goldendale....	Klickitat.....	*State Bank of Goldendale.....	1904	L. T. Gillett.....	O. E. Crooks.....	25,000	61,163	443,000	548,000
Grandview.....	Yakima.....	Grandview State Bank.....	1910	A. W. Hawn.....	A. L. Thiele.....	20,000	11,353	250,000	283,000
Granger.....	Yakima.....	Union Bank	1905	A. C. Turner.....	A. C. Snowden.....	10,000	8,176	101,000	119,000
Granite Falls..	Snohomish...	Granite Falls State Bank.....	1917	B. E. Chappell.....	O. E. Stage.....	15,000	5,547	92,000	113,000
Hamilton.....	Skagit.....	Hamilton State Bank.....	1914	J. H. Smith.....	H. S. Crothers.....	10,000	4,677	79,000	93,000
Harrington....	Lincoln.....	*Harrington State Bank.....	1904	John E. Russell.....	H. O. Jones.....	80,000	14,138	206,000	289,000
Hartline.....	Grant.....	Hartline State Bank.....	1903	H. B. Jones.....	May S. Jones.....	25,000	18,869	183,000	247,000
Hatton.....	Adams.....	Farmers State Bank.....	1907	W. W. Yelsley.....	L. C. Crossland.....	10,000	7,690	78,000	98,000
Hillyard.....	Spokane.....	*Hillyard State Bank.....	1905	W. W. Cooper.....	H. C. Howe.....	25,000	36,316	441,000	502,000
Hoquiam.....	Grays Harbor	Lumberman's Bank	1904	W. E. Ferree.....	R. E. Dawdy.....	100,000	31,330	856,000	1,006,000
Hunters.....	Stevens.....	*Hunters Exchange Office..... (Branch of Lincoln County State Bank, Davenport.)	.....	J. H. Fry.....	G. A. Inster, Mgr..	.....	.....	.....	.....
Iiwaco.....	Pacific.....	Southwestern Washington Bank...	1911	H. Freeborough	P. L. Sinclair.....	10,000	16,210	212,000	238,000
Ione.....	Pend Oreille..	Ione State Bank.....	1909	C. N. Buffum.....	E. Thompson	10,000	8,543	184,000	188,000

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DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 1, 1918.—Continued.

Town	County	NAME OF BANK OR TRUST COMPANY	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Total Deposits	Total Resources
Isaquah.....	King.....	*Isaquah State Bank.....	1913	J. H. Peters.....	A. J. Peters.....	\$25,000	\$7,432	\$194,000	\$226,000
Johnson.....	Whitman.....	Farmers State Bank.....	1907	A. O. White.....	Frank Willoughby..	10,000	5,395	71,000	87,000
Kahlotus.....	Franklin.....	Farmers State Bank.....	1917	E. F. Redd.....	J. V. McCall.....	15,000	4,250	57,000	80,000
Kalama.....	Cowlitz.....	*Kalama State Bank.....	1916	C. C. Ruckles.....	G. N. Campbell.....	15,000	4,109	140,000	159,000
Kelso.....	Cowlitz.....	Kelso State Bank.....	1893	F. M. Carothers.....	F. L. Stewart.....	25,000	44,555	236,000	385,000
Kennewick.....	Benton.....	American Security Bank.....	1916	M. O. Klitten.....	Caroline Klitten ..	20,000	6,355	87,000	113,000
Kent.....	King.....	*State Bank of Kent.....	1906	W. H. Overlock.....	Chas. R. Otey.....	40,000	29,476	399,000	440,000
Kettle Falls...	Stevens.....	*Bank of Colville..... (Branch of Bank of Colville.)		G. W. Peddycord....	O. L. Baker.....				
Kirkland.....	King.....	*Kirkland State Bank.....	1911	Glenn M. Johnson....	Q. E. Lamberth.....	10,000	8,855	168,000	188,000
Kittitas.....	Kittitas.....	*Kittitas State Bank.....	1911	Geo. W. Snodgrass...	H. W. Higman.....	10,000	5,158	116,000	131,000
Krupp.....	Grant.....	*Farmers Bank of Krupp.....	1907	M. A. Wiley.....	H. F. Erickson.....	10,000	13,407	88,000	156,000
LaCenter.....	Clarke.....	*LaCenter State Bank.....	1911	W. A. Mansfield.....	C. A. Button.....	10,000	7,096	91,000	106,000
LaConner.....	Skagit.....	LaConner State Bank.....	1912	N. B. Hannay.....	W. S. Packard.....	25,000	20,146	231,000	276,000
LaCrosse.....	Whitman.....	First State Bank.....	1911	P. B. Stravens.....	Ira M. Camp.....	60,000	64,937	562,000	883,000
LaCrosse.....	Whitman.....	Security State Bank.....	1914	F. L. Gordon.....	J. E. Moore.....	15,000	11,587	114,000	140,000
Lake Stevens..	Snohomish..	The Rucker Bank.....	1914	B. J. Rucker.....	A. D. Campbell.....	10,000	1,094	82,000	94,000
Lamont.....	Whitman.....	Lamont State Bank.....	1908	E. A. Shields.....	T. E. Damrell.....	10,000	23,887	141,000	204,000
Langley.....	Island.....	Langley State Bank.....	1913	H. P. Jensen.....	J. C. Foster.....	10,000	1,847	39,000	51,000
Latah.....	Spokane.....	Bank of Latah.....	1907	Wm. A. McEachern...	A. L. Faler.....	15,000	8,190	179,000	201,000
Leavenworth..	Chelan.....	*Leavenworth State Bank.....	1910	Fred A. Sinclair.....	Robt. B. Field.....	25,000	11,070	363,000	400,000

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DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 1, 1918.—Continued.

Town	County	NAME OF BANK OR TRUST COMPANY	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Total Deposits	Total Re-sources
Lind.....	Adams.....	Farmers State Bank.....	1917	John M. Phillips.....	John W. Webster.....	\$25,000	\$6,679	\$59,000	\$108,000
Loomis.....	Okanogan.....	Okanogan State Bank..... (Branch of Okanogan State Bank, Riverside.)		Hans Lund.....	Arthur Lund.....				
Lyle.....	Klickitat.....	State Bank of Lyle.....	1911	C. F. Hendricksen.....	L. H. Lawson.....	12,500	6,551	80,000	99,000
Lyman.....	Skagit.....	Lyman State Bank.....	1912	G. A. Minkler.....	F. C. Fellows.....	10,000	5,596	57,000	85,000
Lynden.....	Whatcom.....	Lynden State Bank.....	1907	P. M. Serrurier.....	W. B. Vander Griend.....	25,000	18,464	399,000	442,000
Mahton.....	Yakima.....	The Mahton Bank.....	1904	A. T. Carlson.....	Earl Larison.....	25,000	18,059	221,000	292,000
Malden.....	Whitman.....	Farmers & Merchants Bank.....	1908	L. F. Rohleder.....	R. E. Gullick.....	20,000	7,280	151,000	178,000
Mansfield.....	Douglas.....	Farmers State Bank.....	1918	L. T. Griswold.....	George D. Knauss.....	25,000	5,551	88,000	182,000
Mansfield.....	Douglas.....	Mansfield State Bank.....	1909	L. H. Meritt.....	Z. V. Lealie.....	50,000	42,034	370,000	547,000
Marysville.....	Snohomish.....	Marysville State Bank.....	1893	S. T. Smith.....	E. E. Colvin.....	25,000	9,465	249,000	284,000
Metaline Falls.....	Pend Oreille.....	Metaline Falls State & Savings Bank.....	1911	H. E. Neelands.....	A. W. Dressel.....	10,000	3,739	59,000	73,000
Molson.....	Okanogan.....	*Molson State Bank.....	1908	C. S. Barnes.....	G. L. Armstrong.....	25,000	7,921	168,000	263,000
Montesano.....	Grays Harbor.....	Montesano State Bank.....	1897	A. D. Devonshire.....	W. H. France.....	50,000	72,270	761,000	1,086,000
Morton.....	Lewis.....	State Bank of Morton.....	1911	F. M. Broadbent.....	W. W. Morse.....	11,000		122,000	183,000
Mount Vernon.....	Skagit.....	*Skagit County Savings Bank & Trust Company.....	1911	Geo. D. McLean.....	Frank C. Pickering.....	25,000	21,140	226,000	273,000
Moxee City.....	Yakima.....	*Moxee State Bank.....	1914	L. H. Desmarais.....	J. E. McGrath.....	10,000	5,540	72,000	87,000
Naches.....	Yakima.....	*Naches State Bank.....	1910	A. M. Otto.....	J. R. Reynolds.....	10,000	11,949	141,000	165,000
Napavine.....	Lewis.....	*Napavine State Bank.....	1913	F. M. Roberts.....	C. L. Stone.....	10,000	5,251	87,000	102,000
Newport.....	Pend Oreille.....	Security State Bank.....	1906	J. T. Phillips.....	E. W. Anderson.....	25,000	19,942	386,000	378,000
North Bend.....	King.....	State Bank of North Bend.....	1913	W. C. Weeks.....	A. R. Mason.....	10,000	5,912	167,000	188,000

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DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 1, 1918.—Continued.

Town	County	NAME OF BANK OR TRUST COMPANY	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Total Deposits	Total Resources
Northport....	Stevens.....	Miners & Smelters Bank.....	1915	Jerome J. Day.....	J. B. Helpman.....	\$10,000	\$22,729	\$386,000	\$418,000
Oakesdale....	Whitman....	Commercial State Bank.....	1891	E. H. Hanford.....	H. W. Hanford.....	25,000	37,513	430,000	538,000
Oak Harbor...	Island.....	Oak Harbor State Bank.....	1909	Robert Moody	J. M. Pratt.....	15,000	7,041	112,000	135,000
Oakville.....	Grays Harbor	Oakville State Bank.....	1909	W. T. Perkins.....	J. Frank Libby.....	10,000	3,174	84,000	97,000
Odessa.....	Lincoln.....	Farmers & Merchants Bank.....	1915	L. G. Nuelsen.....	Hy. W. Rieke.....	25,000	23,938	246,000	351,000
Odessa.....	Lincoln.....	Union State Bank.....	1911	G. W. Finney.....	O. T. Deets.....	40,000	42,343	494,000	668,000
Okanogan.....	Okanogan....	*Commercial Bank (Branch of Commercial Bank of Concordia)	.....	N. E. Whitworth.....	E. C. Quakenbush, Assistant Cashier.	.....	.....	.....	.....
Omak.....	Okanogan....	Omak State Bank.....	1907	J. H. Slidey.....	John Scott	15,000	7,667	101,000	128,000
Orient.....	Ferry.....	Orient State Bank.....	1910	O. G. Barnard.....	E. S. Moore.....	10,000	4,422	46,000	60,000
Oroville.....	Okanogan....	Bank of Oroville.....	1906	S. C. Mitchell.....	P. M. Snider.....	15,000	3,890	36,000	76,000
Oroville.....	Okanogan....	Union Title & Trust Company...	1910	S. C. Mitchell.....	P. M. Snider, Sec'y..	40,000	2,432	.....	49,000
Orting.....	Pierce.....	Orting State Bank.....	1913	W. J. Thompson.....	M. E. Callender.....	10,000	8,568	94,000	113,000
Othello.....	Adams.....	Othello State Bank.....	1907	H. Siemens.....	J. P. Siemens.....	10,000	7,649	66,000	100,000
Outlook.....	Yakima.....	Outlook State Bank.....	1908	W. H. Norman.....	H. E. Schroeder.....	10,000	6,011	88,000	99,000
Palouse.....	Whitman....	*Security State Bank.....	1889	J. K. McCornack.....	John P. Duke.....	60,000	17,787	476,000	559,000
Pasco.....	Franklin....	Bank of Pasco.....	1908	J. B. Crain.....	E. W. Landt.....	50,000	28,513	232,000	326,000
Pateros.....	Okanogan....	Methow Valley Bank.....	1911	Harry J. Kerr.....	H. Gordon Kerr.....	15,000	5,196	60,000	98,000
Pe Ell.....	Lewis.....	Pe Ell State Bank.....	1914	E. H. Lester.....	O. W. Boynton.....	10,000	1,602	39,000	50,000
Pine City.....	Whitman....	Pine City State Bank.....	1914	A. J. Stone.....	W. O. Palmer.....	15,000	11,918	164,000	191,000
Pomeroy.....	Garfield....	Kettle State Bank.....	1914	N. D. Kettle.....	L. N. Kettle.....	50,000	19,085	661,000	680,000

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Pomeroy.....	Garfield.....	Pomeroy State Bank.....	1897	R. L. Rush.....	W. B. Morris.....	\$50,000	\$155,279	\$1,135,000	\$1,341,000
Port Angeles..	Challam.....	*Bank of Challam County.....	1895	H. E. Lutz.....	S. J. Lutz.....	25,000	23,568	665,000	714,000
Port Angeles..	Challam.....	*Port Angeles Trust & Savings Bank.....	1914	E. J. Walton.....	U. K. Loose.....	25,000	6,836	351,000	468,000
Port Orchard..	Kitsap.....	*Kitsap County Bank.....	1903	Thomas Ross.....	Otto K. Strick.....	20,000	6,597	211,000	238,000
Port Townsend	Jefferson.....	Merchants Bank.....	1889	W. M. Ladd.....	George Welch.....	75,000	26,078	684,000	790,000
Poulsbo.....	Kitsap.....	Liberty Bay Bank.....	1909	Andrew B. Moe.....	A. Brygger.....	10,000	12,534	253,000	281,000
Prescott.....	Walla Walla..	First State Bank.....	1904	H. S. Fender.....	F. J. Fiescher.....	25,000	12,396	193,000	230,000
Prosser.....	Benton.....	Citizens State Bank.....	1905	C. H. Pearl.....	Guy H. Pearl.....	25,000	42,431	323,000	380,000
Prosser.....	Benton.....	Prosser State Bank.....	1902	Harry Oesterle.....	J. F. Sears.....	40,000	26,820	259,000	329,000
Pullman.....	Whitman.....	*Pullman State Bank.....	1892	R. O. McCroskey.....	A. R. Metz.....	37,500	43,327	518,000	630,000
Puyallup.....	Pierce.....	Citizens State Bank.....	1898	Geo. W. Edgerton.....	W. A. Miller.....	25,000	30,771	648,000	704,000
Puyallup.....	Pierce.....	Puyallup State Bank.....	1906	J. S. Alepaugh.....	J. M. Jones.....	25,000	15,365	599,000	640,000
Quincy.....	Grant.....	Quincy Valley State Bank.....	1913	G. E. Sanderson.....	R. O. Wrightman.....	10,000	3,551	132,000	153,000
Raymond.....	Pacific.....	Willapa Harbor State Bank.....	1908	H. W. MacPhail.....	E. E. Collett.....	50,000	45,754	960,000	1,046,000
Reardan.....	Lincoln.....	*Farmers State Bank.....	1909	John Mahrt.....	E. G. Ahrens.....	25,000	13,951	467,000	704,000
Redmond.....	King.....	*Redmond State Bank.....	1911	F. M. Roberts.....	C. A. Shinstrom.....	10,000	9,937	184,000	203,000
Renton.....	King.....	Citizens Bank of Renton.....	1909	O. L. Dixon.....	R. W. Gilham.....	25,000	15,681	538,000	579,000
Republic.....	Ferry.....	Ferry County State Bank.....	1904	P. H. Walsh.....	Jos. L. Walsh.....	25,000	26,474	175,000	237,000
Richland.....	Benton.....	Security State Bank.....	1914	W. R. Amon.....	A. L. Nelson.....	20,000	2,000	103,000	135,000
Ridgfield.....	Clarke.....	Ridgfield State Bank.....	1910	E. L. Thompson.....	P. H. Bell.....	10,000	6,416	89,000	105,000

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Ritzville.....	Adams.....	*American State Bank.....	1904	C. H. Clodius.....	J. F. Lansing.....	\$75,000	\$52,754	\$463,000	\$501,000
Riverside.....	Okanogan.....	Okanogan State Bank.....	1903	Hans Lund.....	Arthur Lund.....	25,000	24,188	143,000	203,000
Rockford.....	Spokane.....	*Farmers & Merchants Bank.....	1906	J. W. Lowe.....	W. L. Oliver.....	17,500	8,038	244,000	269,000
Rosalia.....	Whitman.....	Bank of Rosalia.....	1898	A. J. Oalhoun.....	E. W. Wagner.....	25,000	22,933	257,000	392,000
Roslyn.....	Kittitas.....	Cie Elum State Bank..... (Branch of Cie Elum State Bank.)		Frank C. Carpenter.....	L. R. Nelson.....				
Roy.....	Pierce.....	Roy State Bank.....	1908	Wm. T. Perkins.....	E. S. Enigh.....	10,000	6,417	95,000	121,000
Ruff.....	Grant.....	*Ruff State Bank.....	1911	M. A. Wiley.....	B. F. Paff.....	10,000	15,726	93,000	146,000
Seattle.....	King.....	American Savings Bank & Trust Company.....	1901	J. P. Gleason.....	John K. Bush.....	600,000	243,128	2,455,000	3,727,000
Seattle.....	King.....	Bank for Savings.....	1907	Daniel Kelleher.....	W. H. Crother.....	400,000	32,948	895,000	1,927,000
Seattle.....	King.....	Canadian Bank of Commerce.....	1900	E. B. Ireland, Mgr.....		200,000	135,090	4,034,000	7,287,000
Seattle.....	King.....	Citizens Bank of Georgetown.....	1907	F. W. Newell.....	W. D. Millar.....	25,000	9,242	271,000	305,000
Seattle.....	King.....	Union Savings & Trust Company, Georgetown (Branch of Union Savings & Trust Co., Seattle.)		Joseph A. Swallow.....	Max G. Schmidt, Manager.....				
Seattle.....	King.....	Dexter Horton Trust & Savings Bank.....	1903	C. E. Burnside, Vice President.....	W. W. Scruby.....	400,000	226,251	7,564,000	8,240,000
Seattle.....	King.....	Green Lake State Bank.....	1907	Geo. W. Lear.....	Louis K. Lear.....	25,000	23,959	282,000	331,000
Seattle.....	King.....	*Guardian Trust & Savings Bank.....	1915	Robert Wilton.....	A. O. Kahle.....	100,000	28,073	739,000	870,000
Seattle.....	King.....	Japanese Commercial Bank.....	1907	M. Furuya.....	M. Matsumoto.....	50,000	143,751	2,053,000	2,279,000
Seattle.....	King.....	King County State Bank.....	1913	J. F. Ranning.....	V. J. Bouillon.....	40,000	17,695	203,000	271,000
Seattle.....	King.....	Metropolitan Bank.....	1909	H. C. Henry.....	R. P. Loomis.....	200,000	144,970	3,314,000	4,186,000
Seattle.....	King.....	Northside State Bank.....	1914	Jacob Schaefer.....	Chas. L. Schaefer.....	15,000	825	95,000	111,000
Seattle.....	King.....	Northwest Trust & Savings Bank.....	1900	E. Shorrocks.....	J. V. A. Smith.....	100,000	57,475	2,329,000	2,569,000

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Seattle.....	King.....	Oriental American Bank.....	1905	M. Furuya	H. Hasegawa	\$40,000	\$28,103	\$601,000	\$670,000
Seattle.....	King.....	Peoples Savings Bank.....	1889	E. C. Neufelder.....	J. T. Greenleaf.....	100,000	178,349	3,700,000	3,980,000
Seattle.....	King.....	Rainier Valley State Bank.....	1910	S. T. Toby.....	T. S. Toby.....	25,000	22,514	289,000	317,000
Seattle.....	King.....	*Scandinavian American Bank.....	1892	J. E. Ohlberg.....	J. F. Lane.....	1,000,000	722,000	17,282,000	21,484,000
Seattle.....	King.....	Seattle Trust Company.....	1906	J. E. Ohlberg.....	A. F. Bailey, Treasurer.....	250,000	59,904	.....	553,000
Seattle.....	King.....	Specie Bank	1909	J. T. Kikutake.....	O. M. Uyeda.....	25,000	31,786	585,000	645,000
Seattle.....	King.....	State Bank of Seattle.....	1905	E. L. Grondahl.....	Hugo Carlson	100,000	58,343	2,409,000	2,875,000
Seattle.....	King.....	Title Trust Company.....	1901	Worrall Wilson	W. B. Shoemaker, Treasurer.....	250,000	62,125	.....	450,000
Seattle.....	King.....	Union Savings & Trust Company.....	1903	Joseph A. Swalwell...	F. I. Gill.....	600,000	149,351	5,938,000	7,782,000
Seattle.....	King.....	United States Trust Company.....	1909	Samuel Hill	J. C. Potter, Sec'y.....	500,000	1,000,000	.....	1,500,000
Seattle.....	King.....	University State Bank.....	1906	Harry B. Lear.....	A. W. Hogue.....	50,000	25,490	1,046,000	1,135,000
Seattle.....	King.....	Washington Mutual Savings Bank, (Incorporated 1889 as Washington Savings & Loan Association.)	1917	Raymond R. Frazier...	W. S. Darrow, Sec'y.....	.....	104,520	7,855,000	8,204,000
Seattle.....	King.....	West Seattle State Bank.....	1913	W. T. Campbell.....	J. B. Campbell.....	10,700	7,953	167,000	198,000
Sedro Woolley.....	Skagit.....	C. E. Bingham & Company.....	1912	C. E. Bingham.....	Q. P. Reno.....	50,000	23,514	720,000	848,000
Selah.....	Yakima.....	Selah State Bank.....	1910	C. S. Sundberg.....	Elmer Dahlin	15,000	16,229	270,000	303,000
Sequim.....	Clallam.....	State Bank of Sequim.....	1910	L. J. Bigelow.....	R. W. Schumacher..	10,000	3,148	177,000	190,000
Shelton.....	Mason.....	State Bank of Shelton.....	1893	M. E. Reed	C. I. Pritchard.....	25,000	47,869	457,000	530,000
Snohomish.....	Snohomish.....	Commercial Bank of Snohomish County.....	1903	Herman Friese	Alex Livingston	25,000	14,102	225,000	264,000
South Bend.....	Pacific.....	Pacific State Bank.....	1906	Joseph G. Helm.....	L. W. Homan.....	100,000	89,625	1,158,000	1,846,000
Spangle.....	Spokane.....	*State Bank of Spangle.....	1906	John Peters	O. W. Newton.....	15,000	5,293	180,000	200,000

* Member of Washington Bank Depositors Guaranty Fund.

DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 1, 1918.—Continued.

Town	County	NAME OF BANK OR TRUST COMPANY	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Total Deposits	Total Re-sources
Spokane.....	Spokane.....	Bank of Montreal.....	1903	W. Dick, Manager.....	.....	\$100,000	\$14,952	\$1,286,000	\$1,426,000
Spokane.....	Spokane.....	Clark Bros. & Klein Trust Co.....	1901	A. C. Klein.....	J. Heaton, Sec'y and Treasurer.	15,000	440	.....	131,000
Spokane.....	Spokane.....	Farmers & Mechanics Bank.....	1904	C. T. Tupper.....	E. B. DeVoe.....	50,000	13,568	248,000	327,000
Spokane.....	Spokane.....	Lincoln Trust Company.....	1916	M. E. Hay.....	O. D. Robinson, Secretary.	100,000	35,127	.....	450,000
Spokane.....	Spokane.....	Scandinavian American Bank.....	1908	O. A. Johnson.....	O. Larson.....	100,000	44,442	875,000	1,095,000
Spokane.....	Spokane.....	Security State Bank.....	1906	G. W. Stocker.....	Earl W. Edgington.	25,000	24,115	449,000	498,000
Spokane.....	Spokane.....	Spokane & Eastern Trust Co.....	1930	R. L. Rutter.....	W. T. Triplett, Secretary.	1,000,000	399,795	6,054,000	11,174,000
Spokane.....	Spokane.....	Spokane State Bank.....	1907	J. A. Anderson.....	W. S. Freeman.....	50,000	11,049	211,000	286,000
Spokane.....	Spokane.....	Union Park Bank.....	1906	H. M. Strathern.....	E. R. Anderson.....	25,000	11,159	295,000	309,000
Spokane.....	Spokane.....	Union Trust Company.....	1907	D. W. Twohy.....	A. S. Blum, Treas'r.	200,000	108,734	239,000	547,000
Spokane.....	Spokane.....	Wall Street Bank.....	1906	Gust Pearson.....	G. H. Pearson.....	25,000	10,457	125,000	167,000
Spokane.....	Spokane.....	Washington Safe Deposit & Trust Company.	1901	W. S. McCrea.....	W. G. Merryweather and Secretary.	100,000	157,943	.....	373,000
Spokane.....	Spokane.....	Washington Trust Company.....	1902	M. B. Connelly.....	Frank J. Guse.....	200,000	46,692	712,000	959,000
Sprague.....	Lincoln.....	Bank of Sprague.....	1901	A. L. Smalley.....	Ralph R. Jones.....	30,000	37,346	697,000	795,000
Sprague.....	Lincoln.....	Farmers State Bank.....	1915	Samuel P. Weaver.....	August Witt.....	25,000	12,605	164,000	293,000
Springdale.....	Stevens.....	Farmers & Merchants Bank.....	1908	O. W. Winters.....	Chas. O. Snapp.....	10,000	7,767	93,000	111,000
Stanwood.....	Snohomish.....	Bank of Stanwood.....	1904	W. O. Brokaw.....	O. E. Thompson.....	25,000	16,438	508,000	554,000
Starbuck.....	Columbia.....	Bank of Starbuck.....	1906	W. E. Sprout.....	M. O. Zintheo.....	25,000	11,254	80,000	126,000
Steptoe.....	Whitman.....	Steptoe State Bank.....	1911	Lewis Stalret.....	Richard Hall.....	20,000	3,852	69,000	98,000
Stevenson.....	Skamania.....	Bank of Stevenson.....	1907	E. P. Ash.....	Geo. F. Christensen.	10,000	9,982	181,000	201,000

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DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 1, 1918.—Continued.

Town	County	NAME OF BANK OR TRUST COMPANY	Year Inc.	President	Cashier	Capital Stock	Surplus Undivided Profits	Total Deposits	Total Resources
St. John.....	Whitman.....	*Farmers State Bank.....	1914	R. B. Gaines.....	H. O. Coun.....	\$25,000	\$6,634	\$295,000	\$291,000
Sultan.....	Snohomish.....	*Citizens Bank of Sultan.....	1910	G. G. Startup.....	W. M. Jenkins.....	10,000	6,923	116,000	183,000
Sumas.....	Whatcom.....	Garrison Bros. State Bank.....	1910	A. Schumacher.....	F. S. Garrison.....	40,000	12,566	164,000	217,000
Sumner.....	Pierce.....	Farmers State Bank.....	1916	C. M. Case.....	R. P. Finney.....	25,000	17,272	367,000	399,000
Sunnyside.....	Yakima.....	The Sunnyside Bank.....	1902	R. G. Page.....	Horace L. Miller.....	50,000	33,426	384,000	463,000
Tacoma.....	Pierce.....	Fidelity Trust Company.....	1889	John S. Baker.....	H. V. Alward.....	500,000	464,513	6,117,000	7,401,000
Tacoma.....	Pierce.....	North Pacific Bank.....	1906	E. S. Prentice.....	P. Wallerich.....	25,000	29,084	423,000	477,000
Tacoma.....	Pierce.....	Puget Sound Bank & Trust Co.....	1890	H. N. Tinker.....	W. W. Newschwan- der.....	100,000	106,118	2,056,000	2,283,000
Tacoma.....	Pierce.....	Scandinavian American Bank.....	1907	J. E. Chlberg.....	O. S. Larson, Mgr.....	200,000	165,432	4,276,000	5,095,000
Tacoma.....	Pierce.....	Tacoma Savings Bank & Trust Company.....	1913	F. A. Rice.....	A. A. Miller.....	200,000	55,077	1,397,000	1,653,000
Tekoa.....	Whitman.....	Citizens State Bank.....	1904	A. B. Willard.....	R. S. Kalbfisch.....	25,000	32,053	380,000	412,000
Tekoa.....	Whitman.....	Tekoa State Bank.....	1902	W. A. Mosler.....	O. D. McKeen.....	30,000	29,553	376,000	486,000
Tenino.....	Thurston.....	*Citizens Bank.....	1914	H. S. Barclay.....	L. H. Hubbard.....	10,000	5,577	96,000	125,000
Thornton.....	Whitman.....	Comegys, Hanford & Miller Bank.....	1914	H. W. Hanford.....	Ralph Comegys.....	15,000	7,437	154,000	183,000
Toledo.....	Lewis.....	Toledo State Bank.....	1909	Hugh E. Bran.....	Mrs. S. C. Bran.....	10,000	4,369	122,000	136,000
Toit.....	King.....	*Snoqualmie Valley Bank.....	1911	C. Beadon Hall.....	A. B. Wise.....	10,000	9,146	106,000	128,000
Tonasnet.....	Okanogan.....	Tonasnet State Bank.....	1917	John Woodward.....	F. J. May.....	30,000	6,900	56,000	93,000
Toppenish.....	Yakima.....	Central Bank of Toppenish.....	1910	H. M. Gilbert.....	H. B. Miller.....	50,000	25,568	330,000	440,000
Toppenish.....	Yakima.....	Traders Bank.....	1908	J. B. Cornett.....	W. S. Doran.....	25,000	19,252	463,000	511,000
Touchet.....	Walla Walla.....	Touchet State Bank.....	1914	H. H. Hanson.....	O. L. Renn.....	15,000	5,734	75,000	96,000

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DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 1, 1918.—Continued.

Town	County	NAME OF BANK OR TRUST COMPANY	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Total Deposits	Total Re-sources
Twisp.....	Okanogan....	*Commercial Bank	1909	Wm. G. Hughes.....	Geo. W. Sprouse....	\$35,000	\$10,959	\$152,000	\$209,000
Unlontown...	Whitman....	Farmers State Bank.....	1906	S. Hullard	Chas. A. Button....	25,000	16,525	265,000	306,000
Vader.....	Lewis.....	Little Falls State Bank.....	1911	R. H. Campbell.....	A. N. Cheney.....	10,000	2,392	86,000	98,000
Valley.....	Stevens....	Security State Bank.....	1917	C. W. Winter.....	R. D. Brooke.....	15,000	4,295	73,000	93,000
Valleyford...	Spokane....	*Community State Bank.....	1916	C. P. Thomas.....	C. H. Tart.....	10,000	5,704	77,000	93,000
Vancouver....	Clarke.....	American Security Bank.....	1918	F. E. Bowman.....	D. E. Orandall.....	50,000	7,953	138,000	215,000
Vancouver....	Clarke.....	*Washington Exchange Bank.....	1912	Lloyd DuBols	O. F. Zumsteg.....	50,000	26,767	550,000	622,000
Vashon.....	King.....	*Vashon State Bank.....	1909	T. Hansen	W. B. Schoemaker, Secretary.	10,000	3,382	140,000	154,000
Waitsburg....	Walla Walla..	Exchange Bank	1904	M. Zuger, Sr.....	H. P. Petersen.....	50,000	32,630	235,000	323,000
Walla Walla..	Walla Walla..	Farmers Savings Bank.....	1889	Allen H. Reynolds...	A. A. King.....	200,000	113,009	1,395,000	1,764,000
Walla Walla..	Walla Walla..	Peoples State Bank.....	1911	H. H. Marshall.....	W. H. Tharp.....	100,000	42,395	1,686,000	1,778,000
Walla Walla..	Walla Walla..	Walla Walla Safety Deposit & Trust Company.	1900	W. P. Lathrop.....	T. A. Paul, Sec'y...	4,000			
Wapato.....	Yakima.....	American Commercial Bank.....	1917	P. A. Olney.....	J. P. Denham.....	25,000	4,378	99,000	128,000
Warden.....	Grant.....	*Warden State Bank.....	1906	Chas. Lindenberg	I. H. Muldowney....	10,000	3,563	50,000	73,000
Washougal...	Clarke.....	*Clarke County Bank.....	1907	C. M. Keep.....	T. S. Keep.....	15,000	10,863	170,000	204,000
Waterville....	Douglas....	*Douglas County Bank.....	1904	M. E. Lies.....	C. S. Valentine.....	100,000	49,472	700,000	1,000,000
Waterville....	Douglas....	*Waterville Savings Bank.....	1904	C. T. Hansen.....	Geo. P. Willey.....	50,000	20,008	345,000	491,000
Waverly.....	Spokane....	Waverly Exchange Bank.....	1908	F. Kienbaum	Ralph M. Darknell..	10,000	8,752	145,000	175,000
Wenatchee....	Chelan.....	Columbia Valley Bank.....	1904	Guy O. Browne.....	Chas. E. Owens.....	100,000	42,167	1,048,000	1,278,000
Wenatchee....	Chelan.....	*Commercial Bank & Trust Co. ..	1902	Frank W. Shultz.....	W. D. Shultz.....	50,000	7,871	747,000	906,000

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DIRECTORY OF STATE BANKS AND TRUST COMPANIES AT CLOSE OF BUSINESS NOVEMBER 1, 1918.—Concluded.

Town	County	NAME OF BANK OR TRUST COMPANY	Year Inc.	President	Cashier	Capital Stock	Surplus and Undivided Profits	Total Deposits	Total Resources
Wheeler.....	Grant.....	*Wheeler State Bank.....	1914	E. C. Davis.....	I. M. Oross.....	\$10,000	\$7,512	\$61,000	\$69,000
White Bluffs..	Benton.....	*First Bank of White Bluffs.....	1909	L. E. Johnson.....	W. J. Kincaid.....	10,000	4,087	69,000	88,000
White Salmon.	Klickitat.....	Columbia State Bank.....	1916	G. A. Read.....	A. O. Keefhaver.....	25,000	7,139	223,000	255,000
White Swan...	Yakima.....	*White Swan Bank.....	1916	Alexander Mackel...	O. E. Reimig.....	10,000	2,833	25,000	38,000
Wilbur.....	Lincoln.....	*State Bank of Wilbur.....	1912	J. McPherson.....	Chas. Hudkins.....	50,000	46,129	608,000	1,068,000
Wilkeson.....	Pierce.....	*First Bank of Wilkeson.....	1908	W. H. Pringle.....	H. O. Miller.....	15,000	11,977	206,000	233,000
Wilson Creek..	Grant.....	Wilson Creek State Bank.....	1913	A. A. Weaver.....	D. F. Mordhorst....	15,000	11,848	132,000	168,000
Winlock.....	Lewis.....	State Bank of Winlock.....	1910	H. A. Baldwin.....	F. R. Ness.....	15,000	5,068	206,000	227,000
Winona.....	Whitman.....	Bank of Winona.....	1907	W. C. Morrow.....	Louis Ellert.....	15,000	14,194	201,000	230,000
Winthrop.....	Okanogan.....	*Farmers State Bank.....	1915	Wm. G. Hughes.....	C. B. Jaynes.....	10,000	2,358	87,000	99,000
Withrow.....	Douglas.....	*Withrow State Bank.....	1913	F. E. Weston.....	Harry Short.....	25,000	23,145	251,000	334,000
Woodland.....	Cowlitz.....	*Woodland State Bank.....	1907	L. N. Flamondon....	Geo. E. Cochrane...	25,000	7,008	189,000	221,000
Yacolt.....	Clarke.....	*First State Bank.....	1910	O. Jorgen Olson.....	Martin Claus.....	10,000	11,386	155,000	176,000
Yakima.....	Yakima.....	Central Bank & Trust Company..	1910	H. C. Davis.....	E. S. Rowe.....	50,000	19,994	376,000	448,000
Yakima.....	Yakima.....	*Yakima Trust Company.....	1906	H. C. Lucas.....	Joe L. Oliff.....	100,000	36,682	922,000	1,108,000
Yakima.....	Yakima.....	*Yakima Valley Bank.....	1902	O. E. Fechter.....	Chas. Heath.....	100,000	45,833	1,207,000	1,399,000

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DIRECTORY OF NATIONAL BANKS AT CLOSE OF BUSINESS NOVEMBER 1, 1918.

Town	County	NAME OF BANK	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Total Resources
Auburn.....	King.....	First National Bank.....	C. M. Hall.....	W. T. Behne.....	\$50,000	\$21,000	\$642,000	\$714,000
Bellingham...	Whatcom....	Bellingham National Bank.....	Victor A. Roeder.....	F. F. Handeby.....	200,000	324,000	2,077,000	2,701,000
Bellingham...	Whatcom....	First National Bank.....	E. W. Purdy.....	Alex. M. Muir.....	200,000	223,000	2,700,000	3,234,000
Bellingham...	Whatcom....	Northwestern National Bank.....	H. B. Paige.....	C. K. McMillin.....	100,000	25,000	1,081,000	1,280,000
Bremerton....	Kitsap.....	First National Bank.....	N. B. Solmer.....	Ross Black.....	50,000	10,000	822,000	908,000
Brewster.....	Okanogan....	First National Bank.....	J. L. Goshry.....	Fred D. Rice.....	25,000	8,000	133,000	137,000
Burlington...	Skagit.....	Burlington National Bank.....	H. E. Cleveland.....	Chas. Oallahan.....	25,000	8,000	171,000	230,000
Burlington...	Skagit.....	First National Bank.....	Chris Knutsen.....	E. L. Wilson.....	25,000	5,000	154,000	180,000
Camas.....	Clarke.....	First National Bank.....	O. F. Johnson.....	F. W. Hayungs.....	25,000	16,000	420,000	461,000
Chehalis.....	Lewis.....	Chehalis National Bank.....	A. E. Rice.....	Arthur S. Cory.....	50,000	23,000	569,000	679,000
Cheney.....	Spokane....	National Bank of Cheney.....	F. M. Martin.....	N. A. Rolfe.....	25,000	5,000	165,000	220,000
Cheney.....	Spokane....	Security National Bank.....	W. J. Sutton.....	R. H. Macartney.....	25,000	21,000	413,000	465,000
Chewelah.....	Stevens....	First National Bank.....	C. W. Winter.....	F. L. Reinhoel.....	25,000	19,000	822,000	380,000
Clarkston....	Asotin.....	First National Bank.....	C. F. Waterman.....	W. A. Waterman.....	25,000	7,000	505,000	544,000
Cle Elum.....	Kittitas....	First National Bank.....	W. E. Keehl.....	J. C. Beeson.....	25,000	10,000	370,000	414,000
Coolfax.....	Whitman....	Coolfax National Bank.....	C. L. Mackenzie.....	Dolph Coolidge.....	200,000	75,000	1,330,000	2,060,000
Coolfax.....	Whitman....	Farmers National Bank.....	P. B. Stravens.....	S. A. Kimbrough.....	100,000	103,000	1,205,000	1,462,000
Colville.....	Stevens....	First National Bank.....	Hugh Waddell.....	A. L. Rogers.....	60,000	26,000	503,000	705,000
Davenport....	Lincoln....	Davenport National Bank.....	D. M. Drumbeller.....	E. N. Innes.....	100,000	23,000	975,000	1,363,000
Dayton.....	Columbia...	Broughton National Bank.....	C. J. Broughton.....	A. P. Oahill.....	50,000	24,000	504,000	608,000

DIRECTORY OF NATIONAL BANKS AT CLOSE OF BUSINESS NOVEMBER 1, 1918.—Continued.

Town	County	NAME OF BANK	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Total Resources
Dayton.....	Columbia.....	Columbia National Bank.....	Levi Ankeny.....	Geo. W. Jackson.....	\$100,000	\$170,000	\$1,107,000	\$1,441,000
Ellensburg.....	Kittitas.....	National Bank of Ellensburg.....	E. H. Snowden.....	S. S. Nesbit.....	50,000	13,000	438,000	551,000
Ellensburg.....	Kittitas.....	Washington National Bank.....	G. H. Smithson.....	W. C. Fudge.....	50,000	88,000	1,220,000	1,408,000
Ephrata.....	Grant.....	First National Bank.....	(Not reported).....	(Not reported).....	25,000	3,000	.....	28,000
Everett.....	Snohomish.....	First National Bank.....	Wm. O. Butler.....	L. L. Crosby.....	250,000	121,000	4,728,000	5,149,000
Garfield.....	Whitman.....	Garfield National Bank.....	G. W. Nye.....	L. P. Nelson.....	25,000	8,000	178,000	282,000
Harrington.....	Lincoln.....	First National Bank.....	R. S. Reed.....	W. W. Downie.....	50,000	19,000	454,000	627,000
Hillyard.....	Spokane.....	First National Bank.....	W. S. Brant.....	J. Farrow.....	25,000	9,000	386,000	436,000
Hoquiam.....	Grays Harbor.....	First National Bank.....	W. L. Adams.....	A. G. Rockwell.....	100,000	183,000	2,539,000	2,879,000
Kelso.....	Cowlitz.....	First National Bank.....	E. S. Collins.....	C. C. Bashor.....	25,000	8,000	524,000	582,000
Kennewick.....	Benton.....	First National Bank.....	L. E. Johnson.....	E. L. Tweedt.....	50,000	8,000	435,000	532,000
Kent.....	King.....	First National Bank.....	Annie F. Morrill.....	D. F. Coleman.....	50,000	25,000	479,000	568,000
Lind.....	Adams.....	First National Bank.....	H. E. Gritman.....	H. S. Snead.....	35,000	20,000	287,000	393,000
Medical Lake.....	Spokane.....	First National Bank.....	W. R. Cunningham, Jr.....	B. W. Hughes.....	25,000	11,000	265,000	341,000
Monroe.....	Snohomish.....	First National Bank.....	E. M. Stephens.....	R. W. Jellison.....	25,000	9,000	279,000	321,000
Monroe.....	Snohomish.....	Monroe National Bank.....	O. F. Elwell.....	Whit. H. Clark.....	25,000	6,000	170,000	236,000
Montesano.....	Grays Harbor.....	Montesano National Bank.....	F. L. Carr.....	A. M. Campbell.....	25,000	6,000	240,000	319,000
Mount Vernon.....	Skagit.....	First National Bank.....	N. J. Molstad.....	R. G. Hannaford.....	100,000	98,000	1,184,000	1,380,000
Mount Vernon.....	Skagit.....	Mount Vernon National Bank.....	J. J. Peth.....	R. L. Davis.....	50,000	11,000	475,000	588,000
Oakesdale.....	Whitman.....	National Bank of Oakesdale.....	F. A. Davis.....	J. Weston Martin.....	25,000	9,000	283,000	337,000
Okanogan.....	Okanogan.....	First National Bank.....	C. E. Hansen.....	Harry J. Kerr.....	25,000	6,000	267,000	321,000

DIRECTORY OF NATIONAL BANKS AT CLOSE OF BUSINESS NOVEMBER 1, 1918.—Continued.

Town	County	NAME OF BANK	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Total Resources
Olympia.....	Thurston.....	Capital National Bank.....	C. J. Lord.....	W. J. Foster.....	\$100,000	\$195,000	\$2,405,000	\$2,801,000
Olympia.....	Thurston.....	Olympia National Bank.....	P. M. Troy.....	H. E. VanArsdale.....	50,000	100,000	989,000	1,153,000
Oroville.....	Okanogan.....	First National Bank.....	A. P. Murray.....	S. B. Starrett, Jr.....	50,000	12,000	195,000	281,000
Palouse.....	Whitman.....	National Bank of Palouse.....	R. O. McCroskey.....	O. F. Kinde.....	50,000	9,000	251,000	359,000
Pasco.....	Franklin.....	First National Bank.....	Robt. Janke.....	T. J. Cooper.....	50,000	29,000	445,000	680,000
Port Angeles.....	Clallam.....	Citizens Bank of Port Angeles.....	G. M. Lauridsen.....	J. P. Christensen.....	25,000	13,000	809,000	866,000
Port Townsend.....	Jefferson.....	First National Bank.....	H. D. Hopkins.....	Jas. G. McCurdy.....	50,000	36,000	510,000	606,000
Pullman.....	Whitman.....	First National Bank.....	M. W. Whitlow.....	F. O. Forrest.....	75,000	50,000	989,000	1,133,000
Reardan.....	Lincoln.....	Reardan National Bank.....	H. G. Burns.....	E. A. Davidson.....	50,000	28,000	544,000	642,000
Ritzville.....	Adams.....	First National Bank.....	F. E. Robbins.....	F. H. Haupt.....	75,000	47,000	594,000	737,000
Ritzville.....	Adams.....	Pioneer National Bank.....	O. H. Greene.....	W. H. Martin.....	75,000	74,000	622,000	862,000
Rosalia.....	Whitman.....	Whitman County National Bank.....	W. E. Dwyer.....	F. J. Wilmer.....	50,000	16,000	607,000	712,000
Seattle.....	King.....	Dexter Horton National Bank.....	N. H. Latimer.....	H. L. Merritt.....	1,200,000	398,000	15,743,000	17,731,000
Seattle.....	King.....	First National Bank.....	M. A. Arnold.....	O. A. Philbrick.....	500,000	432,000	12,988,000	14,589,000
Seattle.....	King.....	National Bank of Commerce of Seattle.....	M. F. Bachus.....	R. S. Walker.....	1,000,000	906,000	19,798,000	23,149,000
Seattle.....	King.....	National City Bank.....	J. W. Maxwell.....	N. H. Self.....	500,000	287,000	5,340,000	7,171,000
Seattle.....	King.....	Seaboard National Bank.....	Lee H. Wakefield.....	O. H. Howell.....	200,000	70,000	1,323,000	1,695,000
Seattle.....	King.....	Seattle National Bank.....	Daniel Kelleher.....	H. O. MacDonald.....	1,000,000	446,000	25,557,000	31,295,000
Sedro Woolley.....	Skagit.....	First National Bank.....	J. O. Wixson.....	J. Guddall.....	25,000	12,000	394,000	456,000
Snohomish.....	Snohomish.....	First National Bank.....	F. K. Struve.....	G. A. Middleton.....	50,000	72,000	711,000	845,000
Spokane.....	Spokane.....	Exchanges National Bank.....	Edwin T. Coman.....	C. E. McBroom.....	1,000,000	325,000	7,788,000	12,823,000

DIRECTORY OF NATIONAL BANKS AT CLOSE OF BUSINESS NOVEMBER 1, 1918.—Continued.

Town	County	NAME OF BANK	President	Cashier	Capital Stock	Surplus and Undivided Profits	Deposits	Total Resources
Spokane.....	Spokane.....	Fidelity National Bank.....	Thos. H. Brewer.....	J. J. Rouse.....	\$250,000	\$145,000	\$3,939,000	\$4,979,000
Spokane.....	Spokane.....	Old National Bank.....	D. W. Twohy.....	J. A. Yeomans.....	1,200,000	413,000	14,971,000	19,087,000
St. John.....	Whitman.....	First National Bank.....	H. O. Fisher.....	Harry Terhune.....	40,000	13,000	891,000	879,000
Sunnyside.....	Yakima.....	First National Bank.....	A. B. Snyder.....	H. A. Boose.....	50,000	9,000	839,000	443,000
Tacoma.....	Pierce.....	National Bank of Tacoma.....	Ralph S. Stacy.....	Stephen Appleby.....	1,000,000	394,000	12,774,000	14,944,000
Tonasket.....	Okanogan.....	First National Bank.....	Hans Lund.....	Arthur Lund.....	25,000	12,000	115,000	198,000
Toppenish.....	Yakima.....	First National Bank.....	F. A. Williams.....	L. J. Goodrich.....	25,000	27,000	319,000	376,000
Vancouver....	Clarke.....	U. S. National Bank.....	J. M. Langsdorf.....	J. S. G. Langsdorf....	100,000	88,000	1,425,000	1,662,000
Vancouver....	Clarke.....	Vancouver National Bank.....	Roy Hesseitine.....	P. O. Aller.....	100,000	35,000	1,689,000	1,874,000
Waitsburg....	Walla Walla..	First National Bank.....	J. W. Morgan.....	W. G. Shubam.....	50,000	75,000	970,000	1,145,000
Walla Walla..	Walla Walla..	Baker-Boyer National Bank.....	Mills C. Moore.....	H. H. Turner.....	100,000	233,000	2,646,000	3,028,000
Walla Walla..	Walla Walla..	First National Bank.....	Levi Anteny.....	P. M. Winans.....	200,000	356,000	2,384,000	3,054,000
Walla Walla..	Walla Walla..	Third National Bank.....	Geo. E. Kellough.....	Fred W. Wilson.....	100,000	76,000	1,106,000	1,395,000
Wapato.....	Yakima.....	First National Bank.....	Alex. E. McCredy.....	L. W. Taylor.....	25,000	9,000	445,000	485,000
Washburna....	Adams.....	First National Bank.....	W. R. Cunningham, Jr.	Wm. A. Pearce.....	50,000	19,000	253,000	373,000
Wenatchee....	Chelan.....	First National Bank.....	J. K. McCormack.....	L. L. Mathews.....	50,000	22,000	1,100,000	1,220,000
Yakima.....	Yakima.....	First National Bank.....	W. L. Steinweg.....	O. R. Donovan.....	100,000	182,000	3,042,000	3,887,000
Yakima.....	Yakima.....	Yakima National Bank.....	George Donald.....	Frank Bartholet.....	100,000	204,000	2,375,000	2,728,000
Zillah.....	Yakima.....	First National Bank.....	J. D. Cornett.....	L. H. Kuhn.....	25,000	19,000	325,000	378,000



S

STATE OF WASHINGTON

Ninth Biennial Report

OF THE

State Board of Control

AND

Sixth Biennial Report of the
Board of Managers

Washington State Reformatory

FOR THE

Term Beginning October 1, 1916, and
Ending September 30, 1918

TO THE

Governor and Legislature of the State of Washington

Sixteenth Regular Session

1919

OLYMPIA, WASH.

FRANK M. LAMBORN  PUBLIC PRINTER

1919

LETTER OF TRANSMITTAL.

To His Excellency, the Governor, and the Senate and House of Representatives of the State of Washington.

Gentlemen: Pursuant to the provisions of the law, we have the honor of herewith submitting for your consideration, the Ninth Biennial Report of the State Board of Control for the two-year period ending September 30, 1918, together with our recommendations for appropriations for the years 1919-1920.

T. E. SKAGGS, Chairman.
W. H. COCHRAN,
G. DOWE McQUESTEN.

STATE BOARD OF CONTROL.

(Office, State Capitol, Olympia, Washington.)

T. E. SKAGGS, Chairman. W. H. COCHRAN. G. DOWE McQUESTEN.
G. W. BELT, Secretary. H. N. BOULEY, Auditor.
JESSIE M. WATSON, HAZEL MAAHS, Stenographers.

INSTITUTIONS.

Western State Hospital, Fort Steilacoom.

DR. J. B. LAUGHARY, Acting Superintendent.

Eastern State Hospital, Medical Lake.

DR. A. S. OLIVER, JR., Superintendent.

Northern State Hospital, Sedro Woolley.

DR. J. W. DOUGHTY, Superintendent.

State Custodial School, Medical Lake.

S. C. WOODRUFF, Superintendent.

State Soldiers' Home, Orting.

ED. C. WARNER, Superintendent.

Washington Veterans' Home, Retall.

JOHN J. SEE, Superintendent.

State School for the Deaf, Vancouver.

WALTER M. KILPATRICK, Superintendent.

State School for the Blind, Vancouver.

SADIE E. HALL, Superintendent.

State Penitentiary, Walla Walla.

HENRY DRUM, Superintendent.

State Training School, Chehalis.

THOMAS P. HORN, Superintendent.

State School for Girls, Grand Mound.

MISS MARY CAMPBELL, Superintendent.

State Reformatory, Monroe.

DONALD B. OLSON, Superintendent.

State Capitol, Olympia.

A. J. STOCKS, Superintendent.

Temple of Justice, Olympia.

L. A. COONS, Superintendent.

DR. H. C. KRIEGER, State Dentist.

DUTIES OF STATE BOARD OF CONTROL.

The State Board of Control has full power to manage and govern the following public institutions:

Western State Hospital.
Eastern State Hospital.
Northern State Hospital.
State Custodial School.
State Soldiers' Home.
Washington Veterans' Home.
State School for the Deaf.
State School for the Blind.
State Penitentiary.
State Training School.
State School for Girls.

The business management of the Washington State Reformatory is also vested in the State Board of Control, the reform work of the institution being under the supervision of a separate board called the "Board of Managers of the Washington State Reformatory."

The care, custody and control of the capitol buildings and grounds, with power to designate rooms in such buildings to be occupied by the various state officials, are also duties of this board.

In line with the general work of appointing superintendents and supervising, managing and governing the foregoing institutions and buildings, the law requires the following specific work to be performed by or under the direction of the State Board of Control:

The purchasing of all supplies for state institutions, capitol buildings and grounds.

The appointment of architects, letting of contracts and supervision of the construction of all new buildings at state institutions.

The transportation of convicts, incorrigibles and insane to the institutions to which they have been committed.

The management of the parole department of the penal and reformatory institutions.

The deportation of alien and non-resident insane.

The granting of paroles to inmates of the state penitentiary, who have served their minimum sentences, such work being done in conjunction with the warden of the penitentiary.

The certification to the State Auditor of local improvement assessments against the property of all state institutions, including those not under the jurisdiction of the board.

Apportioning and fixing the price of grain bags and all other products of the jute mill at the state penitentiary.

FINANCIAL REPORT.

EXPENDITURES AND REVERSIONS, OCTOBER 1, 1916, TO APRIL 1, 1917.

Statement showing amounts expended of appropriations of 1915, from October 1, 1916, to March 31, 1917, and amounts reverting to state treasury, April 1, 1917.

Table No. 1.

INSTITUTIONS AND FUNDS.	Expended Oct. 1, 1916, to March 31, 1917	Reverted to State Treasury April 1, 1917
WESTERN STATE HOSPITAL:		
Maintenance, etc.....	\$121,554 11	\$44,516 53
Furniture and carpets.....	511 01	
Library.....	119 22	
Cow barn, improvements, etc.....	7,136 78	87
Totals.....	\$129,321 07	\$44,516 90
EASTERN STATE HOSPITAL:		
Maintenance, etc.....	\$93,744 62	\$82,849 08
General repairs and improvements.....		8 96
Furniture, carpets and bedding.....	3,344 37	9 43
Enlarging water system.....		2 04
Boiler, complets, etc.....		43 65
Remodeling old buildings.....	2,406 26	93 74
Amusements and library.....	12 00	8 70
Totals.....	\$99,507 25	\$83,010 65
NORTHERN STATE HOSPITAL:		
Maintenance, etc.....	\$38,804 25	\$40,388 44
Two ward buildings.....	52,289 94	13 96
Auditorium.....	7,730 71	57
Farm buildings.....		09
Laundry building and equipment.....	1,031 23	62 94
Refrigerating plant.....	607 09	906 37
Library.....		2 39
Repairs and improvements.....	1,943 07	1 66
Totals.....	\$132,406 34	\$41,376 41
STATE INSTITUTION FOR FEEBLE MINDED:		
Maintenance.....	\$61,694 42	\$16,596 32
Buildings, etc.....	66,665 44	18
Totals.....	\$128,349 86	\$16,596 45
STATE SOLDIERS' HOME:		
Maintenance (State).....	\$17,463 96	\$22,406 32
Maintenance (United States).....	13,084 96	* 21,500 71
Maintenance of colony.....	8,888 87	4,794 27
Library.....	135 80	
Repairs and improvements.....	972 94	
Totals.....	\$40,546 53	\$48,701 30

* Balance not reverting.

EXPENDITURES AND REVERSIONS—Continued.

INSTITUTIONS AND FUNDS.	Expended Oct. 1, 1916, to March 31, 1917	Reverted to State Treasury April 1, 1917
WASHINGTON VETERANS' HOME:		
Maintenance (State).....	\$52,633 21	\$17,064 80
Maintenance (United States).....		* 29,162 26
Repairs and improvements.....	356 83	97
Totals.....	\$52,989 54	\$46,248 03
STATE SCHOOL FOR THE DEAF:		
Maintenance.....	\$24,952 63	\$10,193 73
Manual training, repairs, etc.....	2 63	71
Traveling expenses to Gallaudet College.....		772 10
Library.....		41
Totals.....	\$24,955 26	\$10,966 95
STATE SCHOOL FOR THE BLIND:		
Maintenance.....	\$11,992 64	\$3,079 63
Manual training supplies.....	533 17	55 91
Library.....	584 12	4 07
Summer school for adults.....		1 19
Repairs and improvements.....	190 30	47 71
School, administration buildings, etc.....	15,009 88	
Totals.....	\$28,810 11	\$3,188 51
STATE PENITENTIARY:		
Maintenance.....	\$77,768 08	\$25,666 17
Repairs and improvements.....	2,528 62	179 80
Library.....	144 21	06
Salary of chaplain.....	700 00	100 00
Operation of jute mill, etc.....	71,549 06	76,037 10
Totals.....	\$152,689 97	\$101,963 12
STATE TRAINING SCHOOL:		
Maintenance.....	\$22,055 80	\$3,937 78
Repairs and improvements, etc.....	197 98	02
Lumber, seeds, etc.....	4,400 10	55
Amusements and athletics.....	307 58	24
Library.....	211 93	82 30
Totals.....	\$27,173 39	\$4,020 89
STATE SCHOOL FOR GIRLS:		
Maintenance.....	\$17,208 44	\$3,522 81
One new building and equipment.....	1,274 13	12 79
Stock, farm machinery, etc.....	2,119 84	
Library and amusement.....	218 89	
Totals.....	\$20,821 30	\$3,535 60
WASHINGTON STATE REFORMATORY:		
Maintenance.....	\$45,831 68	\$21,102 23
Farm equipment and stock.....	3,153 98	6 16
Storehouse.....	4,099 83	
Installation of oil burning system.....		2,500 00
Completing main building.....	181 18	3 60
Manual training and shop equipment.....	1,728 11	6 12
General repairs and improvements.....	124 10	1 35

* Balance not reverting.

EXPENDITURES AND REVERSIONS—Continued.

INSTITUTIONS AND FUNDS.	Expended Oct. 1, 1916, to March 31, 1917	Reverted to State Treasury April 1, 1917
WASHINGTON STATE REFORMATORY: (Concluded)		
Clearing land.....	\$855 91	\$4,044 65
Water works.....	634 25	9,112 50
Sewers.....	291 15	11 67
Sidewalks.....	369 21	6 08
Salary of chaplain.....	600 00	.....
Library and entertainments.....	303 51	7 68
Duplicate lighting system.....		8,000 00
Totals.....	\$58,172 86	\$39,802 04
CAPITOL BUILDING AND GROUNDS:		
Maintenance.....	\$8,301 19	.....
Repairs and improvements.....	1,501 67	\$1,209 61
Totals.....	\$9,802 86	\$1,209 61
STATE BOARD OF CONTROL:		
Salaries of members.....	\$4,500 00	\$250 00
Salaries of employes.....	2,802 96	51 63
Traveling expenses.....	996 43	265 25
Office expenses, postage, etc.....	1,167 97	238 79
Printing.....	3,038 50	2,166 00
Totals.....	\$12,508 86	\$2,967 27
TEMPLE OF JUSTICE:		
Maintenance.....	\$4,037 30	.....
Transportation of Convicts.....	\$15,255 98	\$7,207 45
Parole Department.....	5,203 23	5,757 68
Deportation of Alien Insane.....	921 91	71,357 69
Grand totals.....	\$943,973 67	\$532,445 45

EXPENDITURES AND BALANCES, APRIL 1, 1917, TO SEPTEMBER 30, 1918.
 Statement showing amounts appropriated by the Legislature of 1917, available
 April 1, 1917, amounts expended from April 1, 1917, to September 30, 1918,
 and balances on hand October 1, 1918.

Table No. 2.

INSTITUTION AND FUNDS.	Appropriations	Expended April 1, 1917, to September 30, 1918	Balance October 1, 1918
WESTERN STATE HOSPITAL:			
Salaries and wages.....	\$190,000 00	\$181,601 09	\$88,306 91
Supplies, material and service.....	270,000 00	228,346 74	46,653 26
Repairs and replacements.....	11,708 00	7,509 95	4,198 05
Painting buildings, etc.....	34,476 00	26,771 68	7,704 32
Detached power house.....	52,000 00	1,410 00	50,590 00
New laundry building, etc.....	20,000 00		20,000 00
Creamery building, silos, etc.....	11,200 00	10,581 05	618 95
Furniture, carpets, equipment, etc.....	6,500 00	1,759 18	4,740 82
Laboratory and surgery.....	1,200 00	470 05	729 95
Totals.....	\$597,084 00	\$408,489 74	\$198,594 26
EASTERN STATE HOSPITAL:			
Salaries and wages.....	\$160,040 00	\$99,859 94	\$60,080 06
Supplies, material and service.....	246,960 00	185,285 37	61,674 63
Repairs and replacements.....	16,800 00	5,702 27	10,897 73
Furniture, carpets, equipment, etc.....	3,900 00	3,527 77	72 23
New wing, silos, etc.....	7,356 00	2,756 14	4,599 86
Fireproof vault and X-ray machine.....	2,600 00		2,600 00
Septic tank.....	3,500 00		3,500 00
Motor truck, machinery and live stock, etc.....	8,080 00	7,422 36	657 64
Light and power equipment.....	10,084 00	534 32	9,549 68
Totals.....	\$458,900 00	\$305,188 17	\$153,611 83
NORTHERN STATE HOSPITAL:			
Salaries and wages.....	\$129,456 00	\$81,181 01	\$48,274 99
Supplies, material and service.....	162,536 00	116,811 05	45,723 94
Repairs and replacements.....	15,000 00	14,667 30	332 70
One male ward building.....	70,000 00	5,549 22	64,450 78
One wing female ward.....	28,000 00	685 80	27,314 70
Land clearing.....	5,000 00	4,666 98	304 02
Nursery stock.....	500 00	429 00	71 00
Wire fencing.....	1,000 00	67 05	932 95
Dredging Hansen Creek.....	10,000 00	9,068 28	16 72
Commissary and store building.....	17,500 00	17,493 03	6 97
Piggery, slaughter house and green house.....	5,000 00	3,569 52	1,430 48
Power house equipment.....	35,750 00	26,589 15	9,160 85
Household furniture, library and entertainment equipment.....	5,000 00	4,727 42	272 58
Concrete structure, supports, etc.—water mains....	9,665 00	9,039 58	625 42
Storm sewer, filter bed.....	7,000 00	2,916 75	4,083 25
New water main to buildings and barn.....	4,000 00	2,597 88	1,402 12
Shop machinery, laundry equipment.....	4,750 00	4,569 38	150 62
Surgery equipment.....	8,000 00	438 74	7,561 26
Totals.....	\$518,156 00	\$306,040 80	\$212,115 40

EXPENDITURES AND BALANCES—Continued.

INSTITUTION AND FUNDS.	Appropriations	Expended April 1, 1917, to September 30, 1918	Balance October 1, 1918
STATE CUSTODIAL SCHOOL:			
Salaries and wages.....	\$95,505 00	\$58,698 77	\$36,816 23
Supplies, material and service.....	166,115 00	111,871 82	54,243 18
Repairs and replacements.....	6,800 00	5,995 07	804 98
Two annexes to buildings.....	80,000 00	2,232 00	77,768 00
Furniture and equipment.....	4,350 00	3,314 68	1,035 32
Piggery, barn, silos, etc.....	15,000 00	14,041 12	958 88
Shop annex and cold storage plant.....	10,500 00	10,490 92	9 08
Central heating plant.....	10,000 00	7,757 09	2,242 91
Filter bed.....	700 00	.....	700 00
Farm machinery, motor truck, etc.....	4,370 00	3,680 23	709 77
Totals.....	\$393,340 00	\$218,051 70	\$175,288 30
STATE SOLDIERS' HOME AND COLONY:			
Salaries and wages.....	\$49,700 00	\$34,272 39	\$15,427 61
Supplies, material and service.....	17,300 00	10,798 43	7,106 57
Supplies, material and service (U. S.).....	60,455 44	53,930 33	6,555 11
Repairs and replacements.....	4,000 00	3,974 90	25 10
Maintenance of colony.....	35,000 00	24,216 89	10,783 11
Clearing land.....	2,000 00	1,742 69	257 31
Hospital building, etc.....	46,500 00	45,367 32	1,132 68
Feeding pen, etc.....	1,000 00	376 40	623 60
Household furniture and equipment.....	1,060 00	553 28	446 72
One auto truck.....	1,600 00	1,600 00	.....
Totals.....	\$218,585 44	\$176,227 63	\$48,357 81
WASHINGTON VETERANS' HOME:			
Salaries and wages.....	\$54,290 00	\$40,544 45	\$13,735 55
Supplies, material and service.....	69,720 00	66,710 49	9 51
Supplies, material and service (U. S.).....	79,203 84	50,453 63	28,750 21
Repairs and replacements.....	11,800 00	9,300 88	2,499 12
Purchase of additional land.....	6,600 00	6,600 00	.....
Women's building.....	25,000 00	25,000 00	.....
Additional boiler, etc.....	7,500 00	11 40	7,488 60
Auto truck.....	1,000 00	971 76	28 24
Fire escapes.....	500 00	18 54	481 46
Office, vault, household furniture and equipment.....	5,800 00	3,764 19	2,035 81
Totals.....	\$251,403 84	\$206,375 34	\$55,028 50
STATE SCHOOL FOR DEAF:			
Salaries and wages.....	\$52,780 00	\$35,249 57	\$17,530 43
Supplies, material and service.....	39,200 00	31,012 09	8,187 91
Repairs and replacements.....	2,700 00	2,634 09	65 91
Traveling expenses to Gallaudet College.....	2,000 00	1,446 15	553 85
One story school building and equipment.....	40,000 00	23,965 85	16,034 15
Linotype and tools.....	3,020 00	2,524 04	495 96
Automobile.....	500 00	500 00	.....
Library.....	200 00	120 10	79 90
Totals.....	\$140,400 00	\$97,451 89	\$42,948 11
STATE SCHOOL FOR BLIND:			
Salaries and wages.....	\$30,180 00	\$20,319 98	\$9,810 07
Supplies, material and service.....	23,870 00	17,302 43	6,567 57
Repairs and replacements.....	1,000 00	965 49	14 51
Land.....	10,000 00	9,575 00	425 00

EXPENDITURES AND BALANCES—Continued.

INSTITUTION AND FUNDS.	Appropriations	Expended April 1, 1917, to September 30, 1918	Balance October 1, 1918
STATE SCHOOL FOR BLIND: (Concluded)			
Kitchen building and equipment.....	\$17,000 00	\$16,318 55	\$686 45
Shop row.....	10,900 00	9,492 53	507 47
Wrecking old buildings, etc.....	2,500 00	2,292 45	207 55
Additional boiler.....	2,500 00	23 85	2,476 15
Vacuum cleaning machine, etc.....	2,840 00	1,230 45	1,609 55
Completing administration building.....	4,584 98	4,584 36	62
Totals.....	\$104,424 98	\$82,120 04	\$22,304 94
STATE PENITENTIARY:			
Salaries and wages.....	\$75,000 00	\$55,390 53	\$19,609 47
Supplies, material and service.....	152,400 00	123,475 41	28,924 59
Repairs and replacements.....	10,000 00	5,881 86	4,118 64
Steel roof, etc.....	24,000 00	900 00	23,100 00
Farm buildings, equipment and live stock.....	4,300 00	3,150 06	1,149 94
Library and equipment.....	2,700 00	800 26	1,899 74
Operation of jute mill, etc.....	201,940 00	171,586 92	30,353 08
Totals.....	\$470,840 00	\$361,184 54	\$109,155 46
STATE TRAINING SCHOOL:			
Salaries and wages.....	\$40,200 00	\$29,022 95	\$11,177 05
Supplies, material and service.....	62,000 00	47,562 44	14,437 56
Repairs and replacements.....	6,000 00	4,404 88	1,595 14
Cleaning and draining land.....	4,000 00	2,723 21	1,276 79
Silo, lumber, etc.....	1,400 00	834 93	565 07
Remodelling bakery, machinery, etc.....	8,400 00	5,468 89	2,931 61
Library.....	1,000 00	621 50	378 50
Totals.....	\$123,000 00	\$90,638 28	\$32,361 72
STATE SCHOOL FOR GIRLS:			
Salaries and wages.....	\$29,800 00	\$19,156 04	\$10,643 96
Supplies, material and service.....	41,700 00	30,441 79	11,258 21
Repairs and replacements.....	2,600 00	1,575 90	1,024 10
Clearing, fencing, bridges, etc.....	10,150 00	5,567 75	4,582 25
One new cottage, etc.....	50,000 00	1,537 05	48,462 95
Green house, etc.....	8,200 00	590 11	7,619 89
Office furniture and equipment.....	2,500 00	1,967 32	532 68
Power house, railroad spur, etc.....	44,000 00	12,092 76	31,907 24
Live stock and farm machinery.....	1,950 00	1,536 28	413 72
Automobile.....	600 00	600 00	.....
Totals.....	\$191,500 00	\$75,055 00	\$116,445 00
WASHINGTON STATE REFORMATORY:			
Salaries and wages.....	\$62,000 00	\$40,225 48	\$21,774 52
Supplies, material and service.....	122,900 00	81,938 37	40,961 63
Repairs and replacements.....	7,500 00	3,295 88	4,204 12
Repairs to stockade.....	1,000 00	805 79	194 21
Farm stock and equipment.....	7,500 00	4,028 17	3,473 83
Water reservoir.....	10,000 00	285 00	9,715 00
Oil, storage equipment, etc.....	5,500 00	3,548 82	1,951 18
Kitchen equipment.....	4,653 00	4,650 11	2 89
Manual training and shop equipment.....	6,300 00	27 31	6,272 69
Land clearing.....	4,000 00	1,644 53	2,355 47
Motor truck.....	3,000 00	2,975 00	25 00
Transmission cables, etc.....	3,500 00	.....	3,500 00
Library and equipment.....	2,000 00	356 86	1,643 14
Printing plant.....	6,000 00	.....	6,000 00
Totals.....	\$245,853 00	\$143,779 32	\$102,073 68

EXPENDITURES AND BALANCES—Continued.

INSTITUTION AND FUNDS.	Appropriations	Expended April 1, 1917, to September 30, 1918	Balance October 1, 1918
CAPITOL BUILDING AND GROUNDS:			
Salaries and wages.....	\$24,200 00	\$17,459 39	\$6,740 61
Supplies, material and service.....	17,800 00	10,197 15	7,602 85
Totals.....	\$42,000 00	\$27,656 54	\$14,343 46
STATE BOARD OF CONTROL:			
Salaries of members.....	\$18,000 00	\$13,500 00	\$4,500 00
Salaries of employees.....	10,200 00	7,494 88	2,705 12
Supplies, material and service.....	15,300 00	8,511 64	6,788 36
Totals.....	\$43,500 00	\$29,506 52	\$13,993 48
TEMPLE OF JUSTICE:			
Salaries and wages.....	\$8,400 00	\$6,182 25	\$2,217 75
Supplies, material and service.....	8,100 00	6,701 97	1,398 03
Totals.....	\$16,500 00	\$12,884 22	\$3,615 78
Transportation of Convicts.....	\$60,000 00	\$39,535 34	\$20,464 66
Parole Department.....	25,000 00	14,458 31	10,541 69
Deportation of Alien Insane.....	85,000 00	7,734 08	27,265 92
Grand totals.....	\$3,944,887 26	\$2,597,377 26	\$1,347,510 00

Table No. 2.

TABLE SHOWING AVERAGE DAILY POPULATION, EXPENSE OF OPERATION, PER CAPITA COST FOR OPERATION, AND TOTAL EXPENDITURES FOR ALL PURPOSES FOR THE SEVERAL INSTITUTIONS UNDER THE STATE BOARD OF CONTROL DURING THE BIENNium OCTOBER 1, 1916, TO SEPTEMBER 30, 1918.

INSTITUTION	Daily Average Population	Total Expenditures for Operation	Cash Receipts Remitted to State Treasurer	Total Net Cost of Operation	Daily Per Capita Cost for Operation	Expenditure Other Than Operation	Total Expenses for All Purposes
Western State Hospital.....	1,387.17	\$478,501.04	\$13,568.08	\$463,032.91	.457	\$54,213.87	\$532,510.81
Eastern State Hospital.....	1,128.76	378,869.98	4,947.41	374,042.52	.446	25,705.49	404,685.42
Northern State Hospital.....	742.51	266,796.32	423.60	266,372.72	.459	171,060.62	438,446.94
State Custodial School.....	337.07	232,256.01	616.46	231,639.55	.640	114,160.55	346,401.96
State Soldiers' Home.....	* 255.46	128,945.07	100.00	128,845.07	.660	76,940.22	307,885.29
Washington Veterans' Home.....	* 507.63	213,841.78	368.32	213,473.46	.574	46,023.10	259,564.98
State School for Deaf.....	98.63	91,214.29	1,071.40	90,142.89	1.31	31,192.86	122,407.15
State School for Blind.....	44.97	49,615.00	426.58	49,188.43	1.50	60,515.15	110,430.15
State Penitentiary (exclusive of Jute mill).....	645.43	256,634.02	768.68	255,875.34	.543	257,240.49	513,874.61
State Training School.....	148.78	98,641.19	562.57	98,078.62	.908	19,170.48	117,811.67
State School for Girls.....	112.80	66,806.27	27.60	66,778.67	.811	29,070.03	95,878.30
State Reformatory.....	247.29	167,995.53	80.00	167,915.53	.680	33,565.65	201,562.18
Totals.....	5,913.37	\$2,427,626.35	\$22,945.65	\$2,404,680.70		\$624,130.51	\$3,351,966.86
Capitol building and grounds.....							\$37,459.40
Temple of Justice.....							16,921.52
Board of Control.....							42,015.38
Transportation of convicts, etc.....							54,791.32
Parole department.....							19,681.69
Deportation of alien insane.....							8,655.99
Grand total.....							\$3,531,492.06

* Including federal fund.

Table No. 4—Continued.
AVERAGE DAILY POPULATION AND AVERAGE DAILY COST PER CAPITA 1900-1918.

BIENNIIUM ENDING	State Penitentiary			State Training School			State School for Girls			State Reformatory		
	Daily Average Population	Daily Per Capita Cost Maintenance	Daily Average Population	Daily Average Population	Daily Per Capita Cost Maintenance	Daily Average Population	Daily Average Population	Daily Per Capita Cost Maintenance	Daily Average Population	Daily Average Population	Daily Per Capita Cost Maintenance	Daily Per Capita Cost Maintenance
September 30, 1902.....	514.09	\$0.3462	168.77	168.77	\$0.3323	.....	.....	.....	.....	.....	.....	.....
September 30, 1904.....	631.57	.8243	152.24	152.24	.8216	.....	.....	.....	.....	.....	.....	.....
September 30, 1906.....	753.39	.8093	184.33	184.33	.8906	.....	.....	.....	.....	.....	.....	.....
September 30, 1908.....	833.98	.8605	216.13	216.13	.4755	.....	.....	.....	.....	.....	.....	.....
September 30, 1910.....	831.37	.8312	233.06	233.06	.5173	.....	.....	.....	.....	.....	.....	.....
September 30, 1912 (as corrected).....	685.92	.5017	269.79	269.79	.6551	.....	.....	.....	.....	.....	.....	.....
September 30, 1914.....	749.63	.4332	306.96	306.96	.6432	.....	.....	.....	.....	.....	.....	.....
September 30, 1916.....	744.61	.436	194.16	194.16	.828	.....	.....	.....	.....	.....	.....	.....
September 30, 1918.....	645.43	.544	148.78	148.78	.908	.....	.....	.....	.....	.....	.....	.....
							* 86.55	\$0.760	330.80	330.80	\$0.7162	.6251
							112.80	.811	338.23	338.23	.7306	.708
									412.44	412.44	.708	.630
									247.29	247.29		

* Eighteen months. Girls moved to Grand Mound December 23, 1914, but their maintenance cost was charged to State Training School until March 31, 1915.

Table No. 5.
AVERAGE DAILY POPULATION.

INSTITUTIONS	1908-1910	1910-1912	1912-1914	1914-1916	1916-1918
Western State Hospital.....	1,287.66	1,380.96	1,397.54	1,377.17	1,387.17
Eastern State Hospital.....	681.90	826.44	939.69	1,070.62	1,138.76
Northern State Hospital.....		† 94.50	254.42	537.78	745.21
State Custodial School.....	158.03	196.28	245.88	438.39	587.07
State Soldiers' Home.....	865.62	852.41	236.76	310.87	255.45
Washington Veterans' Home.....	127.28	168.08	313.93	500.36	507.62
State School for Deaf.....	* 186.13	81.00	93.32	99.40	98.62
State School for Blind.....		23.38	39.93	40.27	44.67
State Penitentiary.....	831.87	685.92	749.63	744.61	645.43
State Training School.....	233.05	269.79	308.93	194.16	143.78
State School for Girls.....				† 85.55	112.80
State Reformatory.....	152.00	330.80	353.23	412.44	247.29
Total daily average population.....	3,973.04	4,411.51	4,997.24	5,811.61	5,913.87

* Includes School for Blind; schools divided April 1, 1909.

† Institution opened April 1, 1911.

‡ Average for eighteen months commencing April 1, 1915.

Table No. 6.
CENSUS OF STATE INSTITUTIONS SEPTEMBER 30, 1918.

INSTITUTIONS	Employees (Not Inmates)	Employees (Families)	INMATES	
			Present	Present and Absent
Western State Hospital.....	133	13	1,419	1,565
Eastern State Hospital.....	102	3	1,180	1,309
Northern State Hospital.....	85	1	840	967
State Custodial School.....	57		620	621
State Soldiers' Home.....	24	2	207	407
State Soldiers' Colony.....	2		133	169
Washington Veterans' Home.....	30	2	438	964
State School for Deaf.....	51	2	120	120
State School for Blind.....	33	2	52	52
State Penitentiary.....	60	4	609	794
State Training School.....	33	3	159	850
State School for Girls.....	20	1	116	257
State Reformatory.....	31	9	226	1,789
Totals.....	661	42	6,119	9,784

Table No. 7.
MISCELLANEOUS FUND.

Cash Receipts Remitted to State Treasurer for Sale of
Products and Discarded Materials.

Western State Hospital.....	\$13,568 03
Eastern State Hospital.....	4,947 41
Northern State Hospital.....	423 60
State Custodial School.....	616 46
State Soldiers' Home.....	100 00
Washington Veterans' Home.....	363 32
State School for Deaf.....	1,071 40
State School for Blind.....	426 58
State Penitentiary (exclusive of jute mill)....	753 68
State Training School.....	562 57
State School for Girls.....	27 60
State Reformatory	80 00

Total..... \$22,945 65

Table No. 8.
STATEMENT OF FARM PRODUCTS.

INSTITUTIONS	1914-1916		1916-1918	
	Acres Tilled	Value of Products	Acres Tilled	Value of Products
Western State Hospital.....	110.41	\$100,946 08	163.91	\$156,250 31
Eastern State Hospital.....	618.9	82,134 87	* 710	127,519 68
Northern State Hospital.....	194	28,062 88	273	48,174 92
State Custodial School.....	450	18,678 44	436	26,691 50
State Soldiers' Home.....	110	15,885 08	120	22,262 99
Washington Veterans' Home.....	2	1,143 11	2	1,799 60
State School for Deaf.....	6	887 57	10	2,434 02
State School for Blind.....		280 24		1,054 25
State Penitentiary.....	145	29,350 21	† 145	36,028 30
State Training School.....	168	14,290 48	186	11,362 97
State School for Girls.....	80	8,990 72	80	10,860 90
State Reformatory.....	150	25,295 83	225	32,900 98
Totals.....	2,029.31	\$315,435 36	2,349.91	\$472,340 41

* In addition to this, 140 acres of land rented.

† A small acreage in addition to this was rented.

Table No. 9.
INVENTORY OF FARM STOCK.

INSTITUTIONS	Cows	Bulls	Heifers and Calves	Pigs	Boars	Horses and Mules	Colts	Sheep	Rabbits and Guinea Pigs	Chickens	Ducks, Geese and Turkeys	Dogs	Estimated Value of All Stock
Western State Hospital.....	65	15	34	377	4	13			349	5,431	23		\$25,650 00
Eastern State Hospital.....	49	1	20	634	5	32		1		1,717	30		24,000 00
Northern State Hospital.....	57	3	39	200	2	11	2						14,850 00
State Custodial School.....	8					10	3			1,000	43		3,100 00
State Soldiers' Home.....	25	1	21	279	1	6							6,600 00
Washington Veterans' Home.....						2							200 00
State School for Deaf.....										287			75 00
State School for Blind.....													50 00
State Penitentiary.....	67	3	30	249	2	16	3			150			20,864 00
State Training School.....	38	2	13	33	1	11	1			1,843	31	6	5,600 00
State School for Girls.....	14		14	97	2	4			73	133			4,000 00
Washington State Reformatory.....	23	3	18	98		12				1,636		4	8,900 00
Totals.....	345	23	194	1,967	17	113	9	1	423	13,437	130	9	\$113,614 00

Table No. 11.

TABLE SHOWING TOTAL VALUE OF STATE PROPERTY UNDER SUPERVISION OF THE STATE BOARD OF CONTROL.

	Real Estate	Buildings	Other	Total
State House and Temple of Justice.....	\$286,000 00	\$964,000 00	\$11,297 00	\$1,261,297 00
Western State Hospital.....	72,880 00	555,795 00	145,837 07	774,012 07
Eastern State Hospital.....	76,969 50	614,974 00	114,833 82	806,777 32
Northern State Hospital.....	117,275 25	730,073 51	101,143 78	948,492 54
State Custodial School.....	43,684 04	572,210 25	141,123 97	757,018 26
State Soldiers' Home.....	29,430 00	84,300 00	30,535 00	144,765 00
Washington Veterans' Home.....	30,200 00	243,306 23	88,312 02	362,318 23
State School for Deaf.....	7,823 00	97,375 09	23,086 23	128,284 32
State School for Blind.....	15,375 00	142,759 87	9,873 09	168,012 96
State Penitentiary.....	29,398 70	507,918 63	258,511 31	796,829 14
State Training School.....	45,300 00	122,494 00	23,255 00	205,949 00
State School for Girls.....	23,749 47	136,430 15	35,873 34	201,057 96
State Reformatory.....	67,770 61	537,985 07	76,203 43	681,959 16
Totals.....	\$350,760 57	\$5,320,622 43	\$1,068,895 61	\$7,240,278 61

**SUMMARY OF APPROPRIATIONS REQUESTED FOR FISCAL PERIOD
BEGINNING APRIL 1, 1919.**

STATE BOARD OF CONTROL:

Salaries of members	\$18,000 00	
Salaries of employes	17,240 00	
Office expenses	3,500 00	
Traveling expenses	5,400 00	
Printing fund	7,500 00	
Total		\$51,640 00
Parole Department		30,000 00
Transportation of convicts, incorrigibles and insane		66,000 00
Deportation of alien and non-resident insane		35,000 00
Grand Total		\$182,640 00

CAPITOL BUILDINGS AND GROUNDS:

Salaries and wages	\$35,930 00	
Supplies, material and service	16,400 00	
Maintenance (repairs and replacements)	5,000 00	
Total		\$57,330 00

TEMPLE OF JUSTICE:

Salaries and wages	\$16,440 00	
Supplies, material and service	10,200 00	
Maintenance (repairs and replacements)	1,200 00	
Total		\$27,840 00

WESTERN STATE HOSPITAL:

Operation—		
Salaries and wages	\$200,630 00	
Supplies, material and service	391,580 00	
Total Operation		\$592,210 00
Maintenance (repairs and replacements)		28,000 00
Capital Outlays—		
Furniture and carpets	\$2,500 00	
Library and amusement	1,000 00	
Completion of irrigation system	3,500 00	
Farm equipment and stock	4,000 00	
Total Capital Outlay		11,000 00
Total Appropriation		\$631,210 00

EASTERN STATE HOSPITAL:

Operation—

Salaries and wages.....	\$197,720 00
Supplies, material and service.....	369,940 00

Total Operation \$567,660 00

Maintenance (repairs and replacements)..... 22,000 00

Capital Outlays—

Library and amusements.....	\$1,000 00
Furniture, carpets and bedding.....	12,950 00
Kitchen equipment	2,000 00
Farm equipment and stock.....	5,250 00
Laundry machinery	2,000 00

Total Capital Outlay..... 23,200 00

Total Appropriation \$612,860 00

NORTHERN STATE HOSPITAL:

Operation—

Salaries and wages.....	\$152,800 00
Supplies, material and service.....	263,360 00

Total Operation..... \$416,160 00

Maintenance (repairs and replacements)..... 18,000 00

Capital Outlay—

Library and amusement.....	\$1,000 00
New fencing and nursery stock.....	2,000 00
Office furniture and equipment.....	1,000 00
Motor truck, feed grinding machinery, binder and hay baler.....	5,500 00
Household furniture.....	2,000 00
Shop machinery.....	1,100 00
Farm equipment and stock.....	1,000 00
Male ward building and furnishings.....	110,000 00
Wing to female ward building and furnishings..	50,000 00

Total Capital Outlay..... 173,600 00

Total Appropriation..... \$607,760 00

STATE CUSTODIAL SCHOOL:

Operation—

Salaries and wages.....	\$100,080 00
Supplies, material and service.....	208,200 00

Total Operation..... \$308,280 00

Maintenance (repairs and replacements)..... 10,000 00

Capital Outlay—

Addition to boiler house and new boiler.....	\$18,000 00
Pipe fittings and covering.....	5,000 00
Addition to septic tank.....	2,000 00
Grounds and roadways.....	1,500 00
Poultry houses and piggery.....	2,000 00
Fencing	1,000 00
Electric and telephone wiring and transformer..	1,500 00
Farm equipment and stock.....	6,000 00

Total Capital Outlay..... 37,000 00

Total Appropriation..... \$355,280 00

STATE SOLDIERS' HOME:**Operation—**

Salaries and wages.....	\$51,540 00
Supplies, material and service.....	55,220 00

Total Operation.....	\$106,760 00
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Maintenance (repairs and replacements).....	15,000 00
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Capital Outlay—

Root house.....	\$1,500 00
Greenhouse	1,000 00
Shop row and woodshed.....	8,000 00
Farm equipment and stock.....	3,000 00
New barracks building.....	75,000 00
Kitchen equipment.....	1,200 00

Total Capital Outlay.....	89,700 00
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Maintenance of colony.....	44,000 00
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Total Appropriation.....	\$255,460 00
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WASHINGTON VETERANS' HOME:**Operation—**

Salaries and wages.....	\$85,880 00
Supplies, material and service.....	105,100 00

Total Operation.....	\$190,980 00
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Maintenance (repairs and replacements).....	8,000 00
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Capital Outlay—

Addition to hospital and furnishings.....	\$50,000 00
Laundry machinery.....	3,500 00
Morgue	1,000 00

Total Capital Outlay.....	54,500 00
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Total Appropriation.....	\$253,480 00
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STATE SCHOOL FOR THE DEAF:**Operation—**

Salaries and wages.....	\$54,780 00
Supplies, material and service.....	49,220 00

Total Operation.....	\$104,000 00
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Maintenance (repairs and replacements).....	5,000 00
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Capital Outlay—

Expenses students Gallaudet College.....	\$2,500 00
Furniture and equipment.....	4,000 00
Shoe machinery.....	1,800 00
Kitchen and laundry equipment.....	1,000 00
Library and amusement.....	500 00

Total Capital Outlay.....	9,800 00
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Total Appropriation.....	\$118,800 00
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STATE SCHOOL FOR THE BLIND:

Operation—

Salaries and wages.....	\$33,510 00
Supplies, material and service.....	30,410 00

Total Operation.....	\$63,920 00
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Maintenance (repairs and replacements).....	2,000 00
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Capital Outlay—

Domestic science equipment.....	\$400 00
Manual training equipment.....	2,230 00
Library and amusement.....	500 00
Pipe organ.....	2,500 00
Garage	500 00
Chicken house.....	200 00
Grading yard and planting fruit trees.....	1,800 00
Equipment for Weir cottage.....	600 00

Total Capital Outlay.....	10,730 00
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Total Appropriation.....	\$76,650 00
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STATE PENITENTIARY:

Operation—

Salaries and wages.....	\$81,000 00
Supplies, material and service.....	225,600 00

Total Operation.....	\$306,600 00
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Maintenance (repairs and replacements).....	10,000 00
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Capital Outlay—

Library and amusement.....	\$1,000 00
Women's building.....	15,000 00
Farm equipment and stock.....	2,000 00

Total Capital Outlay.....	18,000 00
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Operation and purchase of jute.....	319,000 00
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Total Appropriation.....	\$635,600 00
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STATE TRAINING SCHOOL:

Operation—

Salaries and wages.....	\$50,940 00
Supplies, material and service.....	80,500 00

Total Operation.....	\$131,440 00
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Maintenance (repairs and replacements).....	15,000 00
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Capital Outlay—

Clearing 25 acres of land.....	\$1,250 00
Completion of main draining ditch.....	3,500 00
Irrigation system.....	2,000 00
Fencing new land.....	600 00
Purchase of shrubbery and fruit trees.....	750 00
Farm equipment and stock.....	1,500 00
Linoleum for dining room and covering kitchen floor.....	2,500 00
Cottage for superintendent, and furnishings....	5,000 00
Library and amusement.....	1,000 00
Office furniture and equipment.....	400 00

Total Capital Outlay.....	18,500 00
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Total Appropriation.....	\$164,940 00
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STATE SCHOOL FOR GIRLS:**Operation—**

Salaries and wages.....	\$41,040 00
Supplies, material and service.....	59,520 00

Total Operation.....	\$100,560 00
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Maintenance (repairs and replacements).....	4,000 00
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Capital Outlay—

Generator set for power plant.....	\$3,500 00
Cottage and furnishing.....	75,000 00
Engineer's cottage.....	3,000 00
Temporary school houses.....	2,500 00
Temporary farm buildings.....	3,000 00
Farm equipment and stock.....	2,000 00
Library and amusement.....	1,000 00
Domestic science equipment.....	1,200 00

Total Capital Outlay.....	91,200 00
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Total Appropriation.....	\$195,760 00
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WASHINGTON STATE REFORMATORY:**Operation—**

Salaries and wages.....	\$60,000 00
Supplies, material and service.....	104,400 00

Total Operation.....	\$164,400 00
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Maintenance (repairs and replacements).....	5,000 00
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Capital Outlay—

Library and amusement.....	1,000 00
Farm equipment and stock.....	2,000 00

Total Capital Outlay.....	3,000 00
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Total Appropriation.....	\$172,400 00
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GRAND TOTAL OF APPROPRIATIONS REQUESTED.....	\$4,366,010 00
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**STATEMENT OF VISITATION TO INSTITUTIONS BY THE MEMBERS
FROM OCTOBER 1, 1916, TO SEPTEMBER 30, 1918.**

WESTERN STATE HOSPITAL, FORT STEILACOOM.

Year.	When Made.	By Whom Made.
1916	October 26.....	Morse
	November 24.....	Skaggs
	December 7.....	Morse
	December 21.....	Morse
1917	January 4.....	McQuesten, Skaggs, Cochran
	January 5.....	McQuesten, Cochran
	March 13.....	Cochran
	March 14.....	Cochran
	March 22.....	Skaggs
	March 26, 27, 28, 29, 30, 31.....	Cochran
	April 7.....	Skaggs
	April 8.....	McQuesten
	April 27.....	Skaggs, McQuesten
	May 16.....	Cochran, McQuesten
	May 17.....	Cochran
	June 22.....	Skaggs, McQuesten
	June 26, 27, 28.....	Skaggs, Cochran, McQuesten
	July 2, 3.....	Skaggs, Cochran
	July 5, 6, 26.....	McQuesten
	August 9, 10.....	McQuesten
	August 15.....	Cochran
	August 16.....	Skaggs, Cochran
	August 17.....	Cochran
	August 30.....	Skaggs
	August 31.....	Skaggs, McQuesten
	September 1, 4, 5, 8.....	McQuesten
	September 14.....	Skaggs
	October 3.....	Skaggs
	October 9, 26.....	Cochran
	October 27.....	Skaggs, Cochran, McQuesten
	November 3.....	McQuesten
	November 14.....	Cochran
	December 3, 7, 31.....	McQuesten
1918	January 1, 2, 4.....	Cochran
	January 5.....	Skaggs, Cochran
	January 20.....	Skaggs
	January 21.....	McQuesten
	February 4.....	Skaggs, Cochran
	February 5.....	Skaggs, Cochran, McQuesten
	February 6.....	Cochran
	February 9.....	Skaggs
	February 12.....	McQuesten
	February 18.....	Skaggs
	March 1.....	McQuesten
	March 6.....	Skaggs
	March 14.....	McQuesten
	March 15.....	Skaggs
	March 26.....	Cochran
	April 13.....	Skaggs, Cochran
	April 26.....	McQuesten
	May 4, 5.....	Cochran
	May 13.....	McQuesten, Cochran
	May 21, 22.....	Skaggs, Cochran, McQuesten
	June 17, 18.....	Cochran
	June 21.....	Skaggs, Cochran

Year.	When Made.	By Whom Made.
1918	June 22.....	McQuesten
	June 25.....	Cochran
	July 12.....	Skaggs, Cochran
	August 2.....	Skaggs
	August 6, 7.....	Cochran
	August 8.....	Cochran, McQuesten
	August 21.....	McQuesten
	August 30.....	Cochran
	September 3.....	Cochran
	September 11.....	McQuesten
	September 17.....	Skaggs, Cochran, McQuesten
	September 18.....	McQuesten
	September 19.....	Skaggs

EASTERN STATE HOSPITAL, MEDICAL LAKE.

1916	October 8, 9, 10, 11, 12, 13, 15, 16.....	Cochran
	December 18, 19.....	Morse, Skaggs, Cochran
1917	February 17.....	McQuesten
	April 24, 26.....	Skaggs, McQuesten
	May 23, 24.....	Cochran, McQuesten
	June 16.....	Cochran
	July 23.....	Skaggs, Cochran, McQuesten
	August 27.....	Cochran
	September 30.....	Cochran
	October 1.....	Cochran
	November 7, 8.....	Cochran, McQuesten
	December 16.....	Skaggs, Cochran, McQuesten
	December 17.....	Cochran, McQuesten
1918	January 22, 23.....	Skaggs
	February 15.....	Cochran
	March 8.....	Cochran
	April 23.....	Skaggs, McQuesten
	April 24.....	Skaggs, Cochran
	May 31.....	Cochran
	July 13, 14.....	Skaggs, Cochran
	July 15.....	Skaggs, McQuesten
	September 12.....	Cochran

NORTHERN STATE HOSPITAL, SEDRO WOOLLEY.

1916	October 21, 22, 23, 24, 25, 26.....	Cochran
	December 23.....	Morse, Skaggs, Cochran
	December 26.....	Skaggs
1917	March 27.....	Skaggs, McQuesten
	June 7, 8.....	Cochran, McQuesten
	August 9, 10.....	Skaggs
	September 4, 5.....	Cochran
	November 13, 14.....	Skaggs
	November 24.....	Skaggs
	November 26.....	Skaggs
	December 26.....	Skaggs
	December 27, 28.....	McQuesten
1918	January 10, 11, 12.....	Skaggs
	January 23, 29.....	Cochran
	February 28.....	Skaggs
	May 14, 15.....	Skaggs, Cochran
	July 9, 10.....	Skaggs, Cochran, McQuesten

STATE CUSTODIAL SCHOOL, MEDICAL LAKE.

Year.	When Made.	By Whom Made.
1916	November 9.....	Cochran
	December 18, 19.....	Morse, Skaggs, Cochran
1917	February 16.....	McQuesten
	April 25.....	Skaggs, McQuesten
	May 23.....	Cochran
	May 24.....	Cochran
	July 24.....	Skaggs, Cochran, McQuesten
	August 27.....	Cochran
	September 29.....	Skaggs
	September 30.....	Cochran
	November 7, 8.....	Cochran, McQuesten
1918	January 22, 24.....	Skaggs
	February 15.....	Cochran
	April 24.....	McQuesten, Skaggs, Cochran
	July 13.....	McQuesten

STATE SOLDIERS' HOME, ORTING.

1917	January 3.....	McQuesten, Skaggs, Cochran
	January 27.....	McQuesten
	February 28.....	Skaggs
	April 6.....	McQuesten
	May 5.....	McQuesten
	May 12.....	McQuesten
	May 30.....	Cochran
	June 2.....	McQuesten
	June 26.....	Skaggs, Cochran, McQuesten
	July 3.....	Skaggs, Cochran
	August 8.....	McQuesten
	August 18.....	Skaggs, Cochran
	September 14.....	McQuesten
	October 26.....	Skaggs, McQuesten
	November 2.....	McQuesten
	November 30.....	McQuesten
	December 6.....	Skaggs
	December 24.....	McQuesten
1918	January 22.....	Cochran, McQuesten
	February 5.....	Cochran
	February 6.....	Skaggs, McQuesten
	March 9.....	McQuesten
	March 15.....	Skaggs
	March 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31.....	McQuesten
	April 1, 2.....	McQuesten
	April 3.....	Skaggs, McQuesten
	April 4, 5, 6, 7, 8, 9.....	McQuesten
	April 10.....	McQuesten, Cochran
	April 11, 12, 13, 14, 15.....	McQuesten
	April 26.....	Skaggs
	April 29, 30.....	McQuesten
	May 1, 2, 3, 4, 5, 6, 7.....	McQuesten
	May 8.....	Skaggs, McQuesten
	May 9, 10, 11, 12.....	McQuesten
	May 13.....	Skaggs
	May 14, 15, 16, 17, 18, 19.....	McQuesten
	May 21.....	Skaggs, Cochran, McQuesten
	May 31.....	McQuesten
	June 12, 13.....	McQuesten
	June 17.....	McQuesten
	June 21, 28, 29.....	McQuesten
	July 24.....	Skaggs, McQuesten
	July 31.....	Cochran

Year.	When Made.	By Whom Made.
1918	August 7, 16, 20, 27.....	McQuesten
	August 28.....	Skaggs
	August 29.....	McQuesten
	September 6, 10.....	McQuesten
	September 11.....	Skaggs
	September 24, 25.....	McQuesten
	September 26.....	Skaggs

WASHINGTON VETERANS' HOME, RETSIL.

1916	December 1.....	Skaggs
	December 6.....	Morse, Cochran
1917	April 2, 7, 8.....	Cochran
	May 17.....	McQuesten
	July 30.....	Skaggs
	September 12, 13.....	Skaggs, Cochran, McQuesten
	November 8.....	Skaggs
	December 6.....	Cochran
	December 31.....	Skaggs
1918	January 3, 4.....	McQuesten
	January 30, 31.....	Cochran
	February 15.....	McQuesten
	February 16.....	Skaggs, McQuesten
	May 16.....	Skaggs, Cochran
	May 29.....	McQuesten
	August 1.....	Skaggs, Cochran
	August 30, 31.....	Cochran
	September 8, 9.....	Skaggs
	September 26.....	Cochran, McQuesten
	September 27.....	McQuesten

STATE SCHOOL FOR THE DEAF, VANCOUVER.

1916	November 16, 17, 18.....	Morse, Skaggs, Cochran
	December 29, 30.....	Skaggs
1917	March 14, 15.....	Skaggs
	March 28, 29.....	McQuesten
	May 25.....	Cochran, McQuesten
	May 26.....	McQuesten
	August 2.....	Cochran
	August 16.....	McQuesten
	September 18.....	Skaggs
	November 1.....	Cochran
	November 2, 3.....	Skaggs, Cochran
1918	January, 23, 24, 25.....	Cochran
	January 28.....	Skaggs
	March 27.....	Skaggs
	May 10, 11.....	Cochran, Skaggs
	June 26.....	Skaggs
	August 7.....	Skaggs

STATE SCHOOL FOR THE BLIND, VANCOUVER.

1916	October 8.....	Morse, Skaggs
	November 16, 17.....	Morse, Skaggs, Cochran
	December 29, 30.....	Skaggs
1917	February 23, 28.....	Skaggs
	March 14, 15.....	Skaggs
	March 28, 29.....	McQuesten
	May 25, 26.....	Cochran, McQuesten
	August 2.....	Cochran
	August 8.....	Cochran, Skaggs
	August 15.....	McQuesten

Year.	When Made.	By Whom Made.
1917	September 18.....	Skaggs
	November 1.....	Cochran
	November 2, 3.....	Skaggs, Cochran
1918	January 23, 24.....	Cochran
	January 29.....	Skaggs
	March 26.....	Skaggs
	May 10, 11.....	Skaggs, Cochran
	June 26.....	Skaggs
	August 12.....	Skaggs

STATE PENITENTIARY, WALLA WALLA.

1916	October 4, 5, 6.....	Morse, Skaggs, Cochran
	October 7.....	Cochran
	December 12, 13, 14, 15, 16.....	Morse, Skaggs, Cochran
1917	February 18, 19.....	McQuesten
	April 17.....	Cochran, McQuesten
	April 18, 19, 20, 21, 22.....	Skaggs, Cochran, McQuesten
	April 23.....	Skaggs, McQuesten
	June 13.....	Cochran
	July 17, 18, 19, 20, 21.....	Skaggs, Cochran, McQuesten
	August 21, 22.....	Cochran
	August 23.....	Cochran, Skaggs
	August 24.....	Cochran
	September 25, 26, 27.....	Skaggs, Cochran, McQuesten
	October 16, 17, 18, 19, 20.....	Skaggs, Cochran, McQuesten
	November 17.....	Skaggs, Cochran, McQuesten
	December 10.....	Skaggs
	December 11, 12, 13, 14.....	Skaggs, Cochran, McQuesten
1918	January 25, 26.....	Skaggs
	February 12, 13.....	Cochran
	April 14, 15.....	Cochran
	April 16, 17, 18, 19, 20.....	Skaggs, Cochran, McQuesten
	April 21.....	Cochran
	May 26.....	Cochran
	July 16, 17, 18, 19, 20.....	Skaggs, Cochran, McQuesten
	September 30.....	Cochran

STATE TRAINING SCHOOL, CHEHALIS.

1916	October 30.....	Cochran
	December 28.....	Skaggs
	December 29.....	Cochran
1917	February 16, 17.....	Skaggs
	March 14, 15.....	McQuesten
	May 10, 11.....	McQuesten
	May 30, 31.....	Cochran
	June 5.....	McQuesten
	June 29.....	Skaggs, Cochran, McQuesten
	July 4.....	Skaggs, McQuesten
	August 2.....	Skaggs
	August 14.....	McQuesten
	October 10.....	Skaggs, McQuesten
	November 1.....	Skaggs, McQuesten
	November 5.....	Skaggs
	November 9.....	Skaggs
	November 19.....	Skaggs, Cochran, McQuesten
1918	January 4.....	Skaggs
	February 7, 28.....	Skaggs, Cochran, McQuesten
	March 12, 13, 29, 30.....	Skaggs
	April 11.....	Cochran
	May 3, 4.....	Cochran

Year.	When Made.	By Whom Made.
1918	May 22.....	Skaggs, Cochran, McQuesten
	June 20.....	McQuesten
	June 25.....	Skaggs
	July 1, 6.....	McQuesten
	August 19, 20.....	Cochran
	September 18, 24.....	Skaggs

STATE SCHOOL FOR GIRLS, GRAND MOUND.

1916	December 2.....	Morse, Cochran
	December 28.....	Skaggs, Cochran
1917	January 14, 15, 16.....	McQuesten
	February 6.....	Skaggs, Cochran, McQuesten
	February 16.....	Skaggs
	March 12, 13.....	McQuesten
	April 10.....	McQuesten
	May 31.....	McQuesten, Cochran
	June 28.....	Skaggs, Cochran, McQuesten
	June 29.....	Cochran
	July 4.....	Skaggs, Cochran
	August 2, 17.....	McQuesten
	August 28.....	Skaggs
	September 18.....	McQuesten
	October 9.....	Skaggs, McQuesten
	November 1.....	Cochran
1918	January 17.....	Skaggs, Cochran, McQuesten
	February 6, 7.....	Cochran
	February 28.....	Skaggs
	March 1, 13.....	Skaggs
	May 2.....	Skaggs, Cochran
	May 3.....	Cochran
	May 23.....	McQuesten
	June 24, 25.....	McQuesten
	July 5.....	McQuesten
	July 31.....	Skaggs
	August 13.....	McQuesten
	August 19.....	Skaggs
	August 20.....	Cochran

WASHINGTON STATE REFORMATORY, MONROE.

1916	October 11, 12, 13.....	Morse, Skaggs
	October 20.....	Skaggs, Cochran
	October 21.....	Cochran
	November 21.....	Cochran
	November 22.....	Morse, Skaggs, Cochran
	December 5.....	Morse, Skaggs, Cochran
	December 6.....	Skaggs
1917	January 19, 20.....	Skaggs, Cochran, McQuesten
	April 6.....	Skaggs
	April 7.....	Skaggs
	April 11.....	Cochran
	April 12, 13.....	Skaggs, Cochran, McQuesten
	May 18, 19.....	McQuesten
	July 9.....	Skaggs, Cochran
	July 10, 11.....	Skaggs, Cochran, McQuesten
	July 12, 13.....	McQuesten
	July 29.....	Skaggs
	August 10, 11, 22, 29.....	Skaggs
	September 5.....	Skaggs, Cochran, McQuesten
	September 6, 7.....	Skaggs, Cochran, McQuesten
	October 12.....	Skaggs
	November 15.....	Skaggs, Cochran, McQuesten

Year.	When Made.	By Whom Made.
1917	December 2.....	Cochran
	December 4, 5.....	Skaggs, Cochran, McQuesten
	December 6.....	McQuesten
1918	January 30.....	Cochran
	February 1, 2.....	Skaggs
	February 13, 14.....	McQuesten
	March 7, 8.....	Skaggs, McQuesten
	April 4, 5.....	Skaggs
	May 7, 8.....	Skaggs
	May 23.....	McQuesten
	June 4, 5.....	Skaggs, Cochran, McQuesten
	June 6.....	Skaggs, McQuesten
	June 10.....	McQuesten
	June 27, 28.....	Skaggs
	August 12.....	McQuesten
	August 22.....	Skaggs
	August 28.....	McQuesten
	September 3.....	McQuesten, Cochran
	September 4, 5.....	Skaggs, Cochran, McQuesten

GENERAL REPORT.

One change in the membership of this board has occurred during the present biennium. Frank C. Morse resigned on December 31, 1916, and was succeeded on January 1, 1917, by G. Dowe McQuesten, who served as chairman until April 1, 1917. Mr. McQuesten's term expired on the latter date and he was reappointed for a full term of six years. T. E. Skaggs became chairman by operation of law on April 1, 1917.

Conditions such as have obtained during this biennium have never had to be met before in institution work in the history of our state. The budget under which we are now working was prepared in September, 1916, more than six months prior to our entry into the European war. Some of the estimates submitted were reduced by the appropriation act. The funds had scarcely become available before prices began to soar. There are very few articles that have not advanced at least 25 per cent, while some have risen 300 per cent. We are speaking conservatively when we say that at present it requires \$1.50 to purchase the same quantity of goods for institutional use that could have been obtained for a dollar two years ago, while the quality of many articles required has deteriorated very materially, making the period of their usefulness considerably shorter.

The problem of securing efficient help has also been a vexing one. It has been especially difficult to secure cooks, waiters, nurses and skilled mechanics. We have been unable to meet the high wage prevailing on the outside, although it was necessary to grant substantial increases in many instances where the appropriations would permit. The demands of the federal government for all classes of help in civilian positions, as well as the inductions into the army, have forced all institutions to run short handed.

Early in the biennium it became apparent that unless the most rigid economy were exercised and all resources conserved a deficiency of huge proportions would be created long before the close of the fiscal period. We were determined that there should be no such condition if it were possible to avoid it without impairing the efficiency of the institutions or depriving the state's wards of sufficient plain, wholesome food and comfortable clothing and maintenance. Everything that might be termed a luxury and many other things that could not be so classed were cut out, while articles of less cost were substituted for those more expensive where substitution was found practicable. Close co-operation between institutions in the matter of exchanging products has prevailed and nothing has been left unused in the storehouse of one institution if it could be utilized in another.

The results obtained, we think, have been highly satisfactory. While there has been a shortage of help, yet hundreds of loyal officers and employees have remained on the job, bearing more than their share of the burden in order that the high standard of Washington's institutions might not be lowered. In this they have succeeded admirably, for there will not be found one institution in which there has not been progress, in spite of the most adverse conditions.

The vigilance of the last two years has been productive of splendid financial results. In the larger institutions there has been but a slight in-

crease in the per capita cost of maintenance and in one—the Northern State Hospital—there has been an actual decrease. The increases have not been at all commensurate with the high price of supplies that has prevailed during a large part of the biennium. In the institutions with smaller population there has necessarily been a larger increase per capita for reasons that are obvious. We desire to draw special attention to table No. 4, which contains a comparative statement of the per capita cost of institution maintenance for the past nine bienniums; and also to table No. 10, showing the relative cost of the larger items consumed during recent years.

Six months of the present fiscal period still remain. It is too early to say whether all deficiencies will be avoided. Many of our sister states are facing such a condition. One had to call a special session of the legislature in order that its institutions might be kept open. Others are asking for large deficiency appropriations from approaching sessions. We are very hopeful that we shall escape any shortage of funds necessary to carry on the work for the remaining six months. If there be a deficiency in any institution, however, it will be very small.

SUPPORT OF THE WAR.

Since the declaration of war against the Central Powers the interest of our people has been centered on the one great duty of supporting the national government and our gallant army in order that the horrible conflict may be brought to a successful close at the earliest possible date. Our institutions have rendered enviable service in response to every appeal that has been made. The following roll of honor contains the names of employees who have gone directly from the state service into the army:

WESTERN STATE HOSPITAL.

- | | |
|--------------------------------|---------------------|
| 1. Wm. N. Keller, M. D., Supt. | 12. H. R. McMullin |
| 2. F. T. Wilt, M. D. | 13. Karl Kobb |
| 3. A. C. Stewart, M. D. | 14. C. A. Parks |
| 4. J. J. Loyd | 15. Juel Rinker |
| 5. Carl Christianson | 16. R. F. Bolden |
| 6. Jess Stranahan | 17. L. J. Cotton |
| 7. F. J. McCann | 18. R. E. Cole |
| 8. H. Larson | 19. George Owens |
| 9. O. D. Puckett | 20. Charles Keeton |
| 10. J. L. Moore | 21. S. Bjornson |
| 11. J. T. Petrich | 22. Mrs. Emma Davis |
- (With Red Cross)

EASTERN STATE HOSPITAL.

- | | |
|------------------------|------------------------|
| 1. A. Wise, M. D. | 13. S. M. Martin |
| 2. Paul Staley | 14. Earl Burke |
| 3. August Ripkie | 15. George Irvine |
| 4. George H. Jorgerson | 16. Joseph Bednoscheck |
| 5. George Hopkins | 17. William Bowlby |
| 6. Lloyd Olson | 18. M. L. Parsons |
| 7. George Renkert | 19. R. S. Rodarmel |
| 8. Ben Jones | 20. Paul Webber |
| 9. Howard Hawks | 21. William Rigney |
| 10. A. L. Towner | 22. S. C. Harrison |
| 11. C. L. Sinks | 23. F. E. Chester |
| 12. W. F. Hiner | 24. R. E. Angel |

NORTHERN STATE HOSPITAL.

- | | |
|------------------------|---------------------|
| 1. Joseph Hehir, M. D. | 9. Harry Salln |
| 2. Claud Latimer | 10. A. E. Ruffe |
| 3. A. E. Christ | 11. H. G. Scholtens |
| 4. John Latin | 12. Ray Scott |
| 5. John Griswold | 13. Albert Bergauer |
| 6. Leslie Merrill | 14. John Jones |
| 7. R. C. Smith | 15. J. N. Mackenzie |
| 8. Joe Burgess | 16. V. N. Davis |

STATE CUSTODIAL SCHOOL.

- | | |
|--------------------|------------------|
| 1. Cecil Wagner | 5. B. H. O'Leary |
| 2. John Brower | 6. W. M. Navert |
| 3. Ira Bowlby | 7. F. H. Glover |
| 4. T. W. McCartney | |

WASHINGTON VETERANS' HOME.

- | | |
|-------------------|-------------------|
| 1. Martin L. Bibb | 2. J. E. McDowell |
|-------------------|-------------------|

STATE SCHOOL FOR THE DEAF.

- | | |
|--------------------|-------------------|
| 1. John A. Fraser | 3. Fred Howard |
| 2. Frank Williston | 4. James Kingston |

STATE SCHOOL FOR THE BLIND.

- | | |
|---------------------|--------------------|
| 1. Ernest F. Knight | 3. William Langdon |
| 2. Jasper Hughes | 4. John Knight |

STATE PENITENTIARY.

- | | |
|------------------|----------------|
| 1. Lee C. Lewis | 4. C. N. Yelle |
| 2. Erik Elde | 5. S. H. Kemp |
| 3. E. P. Gregory | |

STATE TRAINING SCHOOL.

- | | |
|-----------------|----------------------------|
| 1. O. J. Chase | 4. J. F. Youngstrom |
| 2. A. B. Killon | 5. L. Johnston |
| 3. S. H. Travis | 6. Miss Ada M. Watson |
| | (With Red Cross in France) |

STATE SCHOOL FOR GIRLS.

Miss Miriam Campbell in Red Cross service in France.

WASHINGTON STATE REFORMATORY.

- | | |
|--------------------|---------------------|
| 1. Fred Oliver | 3. Russell Peterson |
| 2. Gerald Sparkman | 4. Arthur Olson |

Total number of employees who have gone from institution service into the army or navy, 95.

In addition to these, ninety-seven inmates of the State Reformatory and seventy-seven from the State Penitentiary have been inducted into the American or allied service.

Mr. Lee C. Lewis, formerly dairyman at the State Penitentiary, was a graduate of the State College of Washington. He was inducted into the service as second lieutenant, was advanced to first lieutenant and then became adjutant of the 1st Battalion, 4th Division (Regular) A. E. F., Europe. A good citizen and brave soldier, he died fighting heroically for his country, having been killed in the battle of Chateau Thierry, France.

The officers and employees in this department have responded to every appeal for war funds most liberally. Thousands of dollars of war savings stamps have been purchased and there have been substantial contributions to

the Y. M. C. A., Knights of Columbus and other organizations engaged in war work. We are unable to give the exact amount of these subscriptions and contributions, but submit the following statement showing the amount of Liberty bonds taken and donations for the work of the Red Cross:

TOTAL AMOUNT OF LIBERTY BONDS.

State Board of Control.....	\$10,700 00
Capitol Building	1,750 00
Temple of Justice.....	750 00
Western State Hospital.....	31,050 00
Eastern State Hospital.....	17,450 00
Northern State Hospital.....	26,100 00
State Custodial School.....	13,100 00
State Soldiers' Home.....	16,100 00
Washington Veterans' Home.....	18,450 00
State School for the Deaf.....	6,100 00
State School for the Blind.....	3,250 00
State Penitentiary	10,750 00
State Training School.....	6,050 00
State School for Girls.....	4,700 00
State Reformatory	3,950 00
Total.....	\$170,250 00

CONTRIBUTIONS TO RED CROSS.

State Board of Control.....	\$264 15
Capitol Building and Temple of Justice.....	117 50
Western State Hospital.....	410 00
Eastern State Hospital.....	575 05
Northern State Hospital.....	517 00
State Custodial School.....	510 50
State School for the Deaf.....	84 00
State School for the Blind.....	187 00
State Penitentiary	*557 75
State Training School.....	192 50
State School for Girls.....	88 75
State Reformatory	189 40
State Soldiers' Home.....	† 429 88
Washington Veterans' Home.....	† 448 15
Total.....	\$4,571 63

* Includes some contributions from inmates.

† Includes some contributions from members.

INSTITUTION FARMS.

It has always been the policy to secure the maximum amount of food-stuffs from the different institution farms, as the per capita cost of maintenance is thereby reduced and fresh and pure food such as it would be very difficult to obtain from other sources is furnished officers, employees and inmates. It became evident early in the biennium that the United States would be required to produce foodstuffs in quantities largely in excess of those grown in any previous year. Steps were immediately taken to put every foot of tillable ground in crop and to increase the productive powers to the highest degree. Although the past two years have been among the most unfavorable in a long period because of the small amount of rainfall, the results obtained have been very gratifying. Table No. 8 will show the

number of acres tilled and the total amount of farm produce raised during this and the preceding biennium.

CONSERVATION OF FOOD FISH.

In the summer of 1917 the State Fish Commission, through Hon. L. H. Darwin, State Fish Commissioner, started a movement to utilize the hundreds of thousand pounds of spawned out salmon at the state hatcheries, which fish had theretofore been discarded as unfit for food. Through the generosity of the commission we were permitted to take a large quantity for institution use, for which no charge was made, the institutions being required to pay only the cost of preparing and shipping them. The fish were subjected to a chemical examination in the chemistry department of the State University and were pronounced to be pure and wholesome. We made arrangements with the Columbia River Packers' Association to can part of them, securing 53,904 cans. The Doty Fish Company salted 11,000 pounds as an experiment. The total cost of the canned salmon was about four cents per can of fifteen ounces and that of the salt fish about two and a half cents per pound.

This year there was great demand by the cities of the state for these fish. On account of labor conditions it was impossible for the fish department to supply the different markets without some assistance from institution labor. Dr. W. N. Keller, superintendent of the Western State Hospital, volunteered to assume the burden of supplying labor from his institution. Dr. Keller, having received a major's commission in the army, left in the midst of the work, but his successor, Dr. J. B. Laughary, has carried on the work in accordance with the original plans. The salt fish were found to be preferable to the canned. Several crews were sent to the hatcheries to care for the salmon as fast as they matured. The result has been that the state institutions are receiving 60,000 pounds at a cost of three cents per pound, and the fish department has been able to conserve a large amount of good food, which has been sold to the people at reasonable price.

DEPORTATION OF ALIEN AND NON-RESIDENT INSANE.

There was appropriated by the last Legislature the sum of \$35,000.00 for the deportation of alien and non-resident insane. In normal times this will be a most important work because more than forty-five per cent of our insane patients are foreign born, a large number of whom can be repatriated and the taxpayers thereby relieved of the burden of their support. On account of the war it has been impossible to deport any foreigners, but the prospects of an early victory and the restoration of peace make the outlook for successful work along this line during the coming biennium exceedingly bright.

We have been able to return a goodly number of non-residents to their home states. During the biennium seventy-nine have been sent to the states in which they had a legal residence. There has been vouchered up to September 30, 1918, the sum of \$7,734.08, but \$280.57 more will have to be paid at a later date, making the total cost of deporting these patients \$8,014.65 or \$101.45 per patient. According to statistics prepared by Dr. W. N. Keller, superintendent of the Western State Hospital, the average hospital life of chronic patients is four years and of those paroled or dis-

charged eighteen months. Tables prepared by other institutions throughout the country show the average length of hospital residence to be considerably greater than those given in foregoing figures, some placing the chronic cases as high as nine years. Taking the figures prepared by Dr. Keller as a basis the value of the deportation will appeal to us at once, as the cost of returning a patient is much less than that of maintaining him for one year.

Should the war come to a close at an early date, as now appears certain, we plan to employ special help for this work and we feel sure that a large number of foreigners can be eliminated from our hospitals. We trust that we shall have this appropriation for work during the coming biennium.

WESTERN STATE HOSPITAL.

No permanent change has been made in the management of this institution during the present biennium. Dr. W. N. Keller, having offered his services to the national government, was given a major's commission. On September 16, 1918, he was given a leave of absence for an indefinite period. We were most fortunate in having Dr. J. B. Laughary, assistant physician, on the ground. Dr. Laughary, while much preferring to remain in charge of the medical work, as a patriotic duty, consented to take the superintendency during the absence of Dr. Keller and has been rendering splendid service under a great handicap in the shortage of medical help and attendants.

Since the date of our last biennial report the federal government has established the national army cantonment at American Lake known as "Camp Lewis." Pleasant and mutually profitable relations have existed between army officers in charge of this cantonment and the management of the Western State Hospital. A number of soldiers, as would be the case in any city of this size, have become insane. The Western State Hospital, located in such close proximity, was of invaluable assistance in caring for these young men until such time as their recovery was effected or they could be returned to their own states.

In return the base hospital at Camp Lewis made the chemical and microscopic examination of the blood and spinal fluid of nearly all new patients committed to the institution. At one time, when an epidemic of typhoid seemed impending, the medical officers from the camp went over and vaccinated all patients and employees, over 4,500 injections having been administered.

At first no charge was made for the care of patients sent over from the base hospital, but the burden became too great for the State to bear and in recent months the government has been compensating at the rate of 90 cents per day.

In addition to the benefits from medical assistance that have come to our hospital from the location of the camp at American Lake, the production of the institution farm has been greatly augmented by the fertilizer obtained from the horse corrals. Over 3,000 tons of manure were received and placed upon the farm during the biennium.

Review of Improvements.

The last Legislature made liberal appropriations for the improvement of the physical properties of this institution, which funds have been used to good advantage, making a fine showing in the appearance of the buildings

and grounds. We shall not attempt to make a detailed statement of all these improvements, which are described at length in the report of the superintendent, but we shall mention a few of the most important.

Remodeling of Wards, etc.—Wards 4, 5 and 6, including the clothes rooms, were completely remodeled with new hardwood floors, new walls, ceilings, galvanized iron roof, etc. The clothes rooms, water sections, which include toilets and baths, and a number of private rooms in wards 10, 11 and 12, were rebuilt. It is necessary that these wards be seen to appreciate the work done. We are asking for appropriations to continue the improvements during the coming biennium.

Painting Buildings—There was available for painting the exterior of the buildings approximately \$11,000.00. Specifications were prepared and the work submitted to competitive bidding. The lowest bid received was several thousand dollars in excess of the appropriation. It was determined that the painting could be done by day labor for the amount of money set aside for that purpose. Materials were purchased after bids had been called for and a crew of paid workers under a competent foreman were employed. The regular institution painter with a number of patients worked with them. After a time it became evident that the entire job could not be completed within the appropriation. The regular painter having developed an efficient crew of patient painters, it was decided to finish the improvement with patient labor. We feel sure that the present plan will be a success and that it will be unnecessary to ask for additional funds. The buildings are being painted a light cream color and, aside from the preservative value, the improved appearance justifies the expenditure of the money for this purpose.

New Irrigating System—In our last budget we asked for \$5,400.00 to install a new irrigating system, which request was granted. At that time a tract of twenty-three acres was being irrigated. The money allowed was insufficient to put in a plant and bring under water as large a quantity of land as was contemplated because of the great rise in prices of machinery and pipe. A new electric pump was installed and a large amount of 16-inch pipe laid. Twenty-five acres were irrigated this year with the new system and fourteen acres with the old. We are asking for \$3,500.00, which will irrigate about forty-eight acres more, making a total of eighty-seven acres. This land is very poor, but it has been demonstrated that with water and fertilizer it can be made almost fabulously productive.

Other Improvements—During the biennium a new hollow tile creamery building has been constructed, the farm annex doubled, a two-story root house of tile construction completed, the calf barn extended to accommodate twenty more calves, a reinforced concrete silo of 180 tons capacity built, the stone fence on the north side of the public road finished, a hollow tile horse barn completed, an extra dairy barn for one of the tubercular pure bred herds built and many other improvements and betterments made, all of which appear in detail in the superintendent's report in another part of this volume.

New Buildings—An appropriation of \$52,000.00 was made to construct a new power plant. Plans and specifications were prepared, but prices had risen so high that it was impossible to build. We could have done a part

of the work and called for an additional appropriation, but, while this new plant is sorely needed, we felt that the cost of construction would be so great that it would be better to await the end of the war and lower prices. In addition to this the government made a general request that all buildings not absolutely essential be postponed until after the war. The architects' fees and expenses were paid and \$50,590.00 will revert to the general fund.

A laundry building was also authorized, \$20,000.00 having been allowed for its construction. A preliminary survey showed the prospects of its construction within the appropriation to be so poor that plans and specifications were not prepared and the full amount of the appropriation will be turned back into the treasury.

EASTERN STATE HOSPITAL.

During the biennium many improvements have been made with funds granted by the last appropriation act. In line with the general policy of securing increased food production the farm has been kept up to its previously high state of efficiency and quite an additional acreage brought under cultivation. During the last biennium 618.9 acres were in crop, while 760 acres were cultivated during the first year of the present biennium and 850 acres during the present year. Of this land 140 acres have been rented from private parties on the share plan. With the funds granted for the purchase of livestock four work teams of horses and mules have been purchased, as have also a Holstein bull and two thoroughbred boars.

Additions and Improvements.

The store room has been enlarged, a new cement floor laid and walls plastered and jointed; the grandstand at the recreation grounds replaced with a clean and sanitary structure; five pig houses and farrowing pens built; a new barn erected to care for the dairy cows during calving time; the local automatic telephone system extended to the out houses; the power and light line carried to the farm, three miles distant; new scales of ten-ton capacity installed; a three and one-half-ton Signal truck purchased; the lawns and grounds improved by the extension of the concrete sidewalks; several dormitories stripped of wainscoting and hard plastered; out buildings painted; the interior of many main wards painted, calcimined and repaired; a new road surveyed and graded to the Peat place on the opposite side of Little Medical Lake, and a new lathe installed in the machine shop. For a detailed statement of these and other improvements reference is made to the superintendent's report published herewith.

Old Custodial School Buildings.

When the State Custodial School completed its removal to its present site there were turned over to the Eastern State Hospital for its use the buildings originally occupied by the former institution. The occupancy of these buildings has been delayed as long as possible in the interest of economy because they will require an overhead charge almost as great as a separate institution. The time is rapidly approaching when they must be utilized. A new road has been constructed to them from the main hospital buildings and they will be remodeled and used during the coming winter.

New Wing to Greenhouse.

The new wing to the greenhouse, for which financial provision was made, has not yet been erected. The materials have been purchased, however, and its completion within a short time is assured.

Silos and Septic Tank.

Two silos and a septic tank are among the items of capital outlay for which funds are now available. These have not been built, but we hope they will be completed and in use before the close of this fiscal period. If it develops that they can not be, we shall ask for the reappropriation of the funds.

Enlarging Water Mains.

The pumping plant, located at Clear Lake, more than two and one-half miles from the main buildings, supplies this institution and the State Custodial School with water. The pipe is too small and hardly strong enough to stand the pressure of the new pump which was installed during the preceding biennium. At the present time all of the water is pumped to the hospital and the Custodial School is served by another line from the hospital reservoir. It was planned to put in a ten-inch main from the pumping plant to a point distant 5,100 feet and subsequently put in a connecting main from that point to the Custodial School, delivering the water for the latter institution into a separate reservoir to be constructed when funds were provided. It is expected that this improvement will be completed soon.

During the last few years Clear Lake water has developed quite a disagreeable odor. This appears to be caused by a vegetable growth in the bottom of the lake. The water does not seem to have been made impure by this growth, but the odor is so bad that it can hardly be used for domestic purposes. Each summer it has grown worse, clearing up in the winter. When heated it gives off an odor that permeates the whole institution. It seems imperative that some other source of supply be found. Under the heading "State Custodial School" we outline our plan of procedure.

NORTHERN STATE HOSPITAL.

At the close of the last biennium 194 acres of land were being cultivated. During the present period 79 acres more have come under the plow, making a fine farm of 273 acres, the productive capacity of which has increased through fertilization and cultivation. Although the past two years have been very dry in this section, as in others, a splendid showing has been made.

New Buildings.

Male Ward Building—All bids received for this building as originally planned were far in excess of the appropriation. It was decided to erect a building of the same general construction as the other cottages, but of a different type, and to place it down near the barns where the farm crews could live. This building will cost about \$60,000.00 and will house as many

patients as that originally planned. About \$10,000.00 of the appropriation will revert.

Wing to Female Ward Building—The bids received for this building were so high that it could not be built. The appropriation, less the architects' fees, will revert and we are asking for a new appropriation with which to construct it next year.

Commissary Building—The funds allowed for a commissary building were found sufficient and it has been completed and is now occupied.

Power House and Equipment—A new power house, in harmony with the architecture of the other buildings, together with a concrete stack 120 feet high, was built and a new Stirling 250 horsepower boiler installed, giving the institution a fine, modern power and heating plant with a boiler capacity of 750 horsepower.

Other Improvements.

A piggery has been built; a greenhouse now in course of construction will soon be completed; an employees' dormitory has been erected with old lumber and materials on the ground; concrete supports placed under the water mains; five bridges constructed; root house, hay barn and implement shed erected; Hansen creek dredged so as to give sufficient fall for the disposal of sewage; storm sewer extended and new water mains laid to main building, piggery and barns; exterior of administration and four ward buildings painted, and many other improvements to buildings and grounds too numerous to itemize made.

Needs for Next Fiscal Period.

This hospital is growing rapidly. The geographical apportionment of the different counties makes the commitments to it substantially the same as those of the Western and Eastern State Hospitals combined. We must have more wards to care for this population. In our budget we have requested funds for a new male ward building and wing to the present female ward building. It will tax the institution to its utmost to get through the biennium with this additional space. If the war ends before the convening of the Legislature we mean to ask for an additional ward for women.

STATE CUSTODIAL SCHOOL.

At the time of the last biennial report the administration building, girls' custodial building, two cottages, central heating plant and laundry were still in course of construction. They were all subsequently completed well within the appropriation and the remaining inmates at the old plant removed to the new buildings in the month of February, 1917. The present institution is one of the most modern, architecturally beautiful and best adapted to the work for which it was established that can be found anywhere in the country.

New Buildings and Improvements.

Annexes to Custodial Buildings—There was granted an appropriation of \$80,000.00 for two annexes to the present custodial buildings, which were expected to care for 120 defective children who need constant supervision. When bids were received it was found that the money in hand would not

erect one annex. No further attempt was made to secure the buildings. The architect's fees were paid and \$77,768.00 will revert to the treasury. No funds are requested from this session because it has been deemed best to await an era of lower prices. This action is also satisfactory because it will give the superintendent an opportunity to make many needed improvements in and around the institution, which can be done much better if he is not burdened with new construction.

Cold Storage and Shop Annex to Boiler House—These buildings have been completed and are now in use. The cold storage building is of brick construction, lined with hollow tile and compressed cork and is equipped with an ice-making machine. The shop annex is of the same exterior construction and contains a blacksmith shop and ample storage space for supplies.

Farm Buildings—A fine new dairy barn with solid 18-inch concrete walls up to the top of the first story, concrete floor except in the stalls where creosoted blocks were used, containing sixty stalls with steel stanchions, one bull pen, two maternity pens, hay loft of 200 tons capacity, equipped with track and feed carriers and modern ventilating system, is one of the many accomplishments of the biennium. Two hollow tile 128-ton silos add to the architecture and completeness of the dairy barn. Three hog houses and six chicken houses were also built. Further appropriations are necessary to add a modern piggery and more chicken houses and to carry the light and power line to the barn.

Sewer—A sewer 6,400 feet in length, made of concrete pipe manufactured at the school, designed to carry the sewage from the septic tank to West Medical Lake, was completed October 5, 1917. The excavation was eight and ten feet deep in places and through solid rock, practically all of the work being done by the boys at a saving of at least \$10,000.00 over its cost had it been done by contract or day labor. In addition to this sewer an underground cement conduit $3\frac{1}{2}\times 4$ feet and 850 feet in length to carry the surface water from the hills back of the buildings to a point across the county road was constructed. This work was also done by the boys and at the same proportional low cost.

Concrete Tunnels—About 1,300 feet of tunnels, which will carry the steam, hot water and electric lines between the five original buildings and the central heating and power plant, will soon be completed. About two-thirds of this tunnel is $6\frac{1}{2}\times 6\frac{1}{2}$ feet and the remaining one-third $5\times 5\frac{1}{2}$ feet. The work was done by the boys as in the case of the sewer. The cost to the State was about \$2.25 per foot as against a cost of approximately \$16.00 per foot had it been done by day labor or contract. During the preceding biennium the tunnel was constructed for the buildings erected at that time. The new tunnel makes the system complete and as soon as the pipes and wires are installed the individual heating plants in the old buildings will be abandoned and everything served by the central plant.

Pipes and Fittings to Connect Old Buildings with Central Heating Plant—An appropriation of \$5,000.00 was made to provide the pipe and fittings to connect the original five buildings with the central plant erected last year. This is the installation that is to go into the tunnel above de-

scribed. At the time the estimate was made the amount was adequate, but when the money became available it was insufficient. It was decided to purchase all that the appropriation would procure and ask for additional funds at the coming session. It will require \$5,000.00 more to complete the work.

Filter Bed—An allowance of \$700.00 was made to place a filter bed at the end of the sewer in order that the sewage may be filtered before entering the lake. This has not been completed, but will be before the close of the fiscal year.

Other Improvements.

Among the many other improvements are 2,062 feet of cement walks, a large cement platform at the kitchen door and another in front of the cold storage, 2,000 feet of cement parking and roadway curb, concrete coal bunkers to hold 800 tons of coal, installation of kitchen and shop equipment and the purchase of a three and one-half-ton Garford truck and a Fordson tractor.

Water Supply.

In our report on the Eastern State Hospital we mentioned the condition of the water now being furnished the two Medical Lake institutions. Some steps should be taken to find a new supply source. The only way to secure pure water in sufficient quantities is to drill a well. There is a drilling outfit now at the State Reformatory, which is owned by the State Penitentiary. This could be borrowed and used for experimenting. The only expense would be for some new cables, casing, fuel and a man to run the machine. It seems most feasible to drill in the hill back of the institution. If water were found there it would be less apt to be contaminated than if found lower down where there would be considerable seepage.

STATE SOLDIERS' HOME.

This is an old institution, the buildings being of frame construction and evidently planned with the idea that they would serve a temporary purpose. It now appears that soldiers' homes will be needed for many years to come. We believe that this home should be gradually rebuilt with permanent and fireproof buildings. We realize that this cannot be done in one biennium. A good start was made last year and we trust it will continue.

Hospital Building—An appropriation of \$46,500.00 was made to build a new hospital building and remodel the old hospital for use as a barracks building. A building constructed of burlap brick with laminated floors and walls, making it nearly fireproof, has been completed. It is a fine edifice, having accommodations for about seventy-five patients, modern and sanitary and a credit to the State.

New Kitchen—The kitchen and adjoining rooms have long been an eyesore. No funds were provided to build a new one and it seemed to us that the old quarters could not be endured until another session of the Legislature. We took the position that the United States Maintenance Fund could be used for that purpose. The attorney general was asked for an opinion and he sustained our view. Mr. L. R. Coombs was put in charge of this work, as well as other improvements, the old kitchen was torn down,

all good materials saved, some new supplies purchased and there will be completed within a few weeks this building, which will be new, clean, sanitary and adequate for the institution. As it is in the rear of a wooden building and as the funds would permit nothing else, it is also of frame construction with a smooth cement floor.

Land Clearing—Two thousand dollars were given for land clearing. Twenty acres were blown and made ready for stump pulling, piling and burning. Seven acres of this were fully cleared and put in crop this year. The sum of \$257.31 still remains to be used.

Feeding Pen and Slaughter House—These are now in course of construction and should be completed within a short time.

General Repairs and Improvements—A great deal of money can be spent on an old plant of this character without the results being visible to a casual observer. The following are some of the things that have been done during the biennium:

Pickering Building.

New fire escape with concrete footing built.
Large chimney torn down, brick cleaned and saved.
Roof repaired.

Power House.

Coal shed built.
New steel stack erected.

Washington Building.

New fire escape with concrete footing built.
Toilet rooms upstairs and down remodeled by tearing out wooden floors and wainscoting and replacing with cement floors and Keene cement plaster on walls, and putting in new fixtures.
New floors put in two smoking rooms and floors in three other rooms repaired.
Porch floors painted and plaster wall repaired in two rooms.

Rogers Building.

Entire new foundation of 80 concrete piers constructed.
New skirting placed around building.
New floors on porches, new steps and floors in billiard room.
All new floors painted.
Glass doors and transoms put at each end of corridor in second story.
Two new fire escapes with concrete footings placed at each end of corridor.
Extensive repairs made to plumbing.

Lincoln Building.

New sills, joist, lining floor and top floor in kitchen.
New porch floor and foundation and new steps at side entrance. All porch floors painted.

Old Hospital Building.

Concrete piers and new foundation placed under about one-third of building. Front porch repaired.

Superintendent's Residence.

Foundation under kitchen repaired.

General.

Steam lines under all buildings repaired, 2,500 feet of pipe covering ordered, which will be used as soon as it arrives.

Budget.

We desire to make particular mention of four items in the budget.

Barracks Building—As we have stated in this and previous reports, the old buildings are dangerous and unsanitary. The fire risk makes one shudder. They ought to be replaced with permanent buildings as rapidly as possible. A new barracks building of brick construction could be built to replace one of the present structures—preferably the Pickering building—for \$75,000.00. This would care for 120 men. Two such buildings and the present hospital building would house the entire membership. We believe it would be good business judgment to make this investment. However, we have asked for only one building in the budget because of high prices of materials and labor and the request of the national government that no building be done if it be possible to get along without it. If the war should end before the adjournment of the Legislature we would recommend that appropriations be made for two buildings.

Shop Row and Woodshed—There are a number of little wooden shacks on the grounds used for barber shop, shoe shop, etc., and an unsightly woodshed. It is proposed to erect a brick shop row, in which would be installed the barber, shoe and tailor shops, and to move the wood to another and less conspicuous place and build a new shed for it. This appropriation should be granted.

Repairs and Replacements—The amount asked for this purpose is \$15,000.00. This is the least amount with which the old buildings can be put in proper condition and, if only one new building is allowed, the request should be granted.

Colony Maintenance—Members of the colony have heretofore received rations amounting to \$100 a year. We are asking that this be increased to \$125, which should be granted in view of the large increase in the cost of provisions.

Fatigue Duty.

The time has come when fatigue duty should be abolished. The Civil War veterans, who constitute a large majority of the membership, are aged and infirm. They are unable and should not be required to do the work longer. In view of the great service they have rendered to their country and humanity they ought to be allowed to spend the closing years of their lives in ease and comfort. During the past year we have been able to afford some relief by transferring some boys from the State Reformatory to help around the home. These boys have done splendid work and their conduct has been exemplary. Only one boy has had to be returned to the Reformatory because of infractions of the rules. During the coming biennium, however, when the labor situation is relieved, this work should be done by paid help.

WASHINGTON VETERANS' HOME.

In September 1, 1918, Colonel W. H. Wiscombe tendered his resignation as superintendent of this home. Colonel Wiscombe was at the head of the institution many years and rendered a service to the State and to his comrades that cannot be estimated in money. He retired voluntarily to take a much needed rest. A worthy successor was found in Captain John J. See, of Anacortes, formerly department commander of the Grand Army of the Republic. It is a source of much satisfaction to us that, although the Civil War closed more than fifty-three years ago, there still remain veterans of that memorable conflict in full bodily strength and mental vigor to fill these positions.

Improvements.

Women's Building—We are glad to be able to report the construction of this building within the appropriation. It is of the same general construction as the other buildings and has capacity for fifty-six women.

Purchase of Land—The strip of land on the west side grounds, for which an appropriation of \$6,600.00 was made, was purchased and the title has passed to the State. This was a most fortunate transaction, as it shuts off any other buildings between the property of the State and the street.

Additional Boiler—The sum appropriated was not sufficient to purchase and install a boiler of the size and capacity needed. Several attempts to secure a second-hand boiler were futile. Finally, after careful investigation, we let the contract for a smaller boiler with the Uren attachment, which increases its power. The boiler now being built will develop 150 horsepower.

Hospital Building—The hospital building has been greatly improved during this biennium. It has been painted on the outside and the interior has been painted and calcimined; the floors cleaned and oiled; the linen and operating rooms torn out and the space made into a woman's ward to accommodate twelve women; the kitchen remodeled and equipped with a new chimney, range, sinks, tables and ice chest, and the dining room enlarged and remodeled, the old floor having been replaced with one of seasoned maple.

Other Improvements—Some painting has been done in the Olympian building, but there still remains more to be done; a cement floor was laid in the bakery; the boilers rebricked and new grates installed; new driveways built and all driveways regraded and graveled, and a small auto truck purchased.

Fuel.

During the last year the government shut off the supply of fuel oil and we had to convert the furnaces for coal burning. It was found that even with the increased price of fuel oil, its cost was about \$20.00 or \$25.00 a day less than coal. The matter was referred to His Excellency, Governor Lister, who presented the facts to the United States Fuel Administration with a request that permission be given the oil companies to deliver oil to this institution. This request was granted and we were soon being supplied with fuel oil, thus saving a large sum over the use of coal.

Budget.

Particular reference is made to one item in the budget submitted to the Board of Finance. The advanced age and enfeebled condition of the members of the home make it more of a hospital every year. The present hospital is inadequate and there are many people in the barracks buildings and cottages who need hospital care, but cannot receive it. Aside from this feature there should be a separate hospital for women. We are requesting an appropriation to build and equip an addition to the hospital now in use, which annex would care for approximately sixty women. This would aid in relieving the congestion in the other buildings and enable the infirm cases now in this building to receive needed hospital attention.

STATE SCHOOL FOR THE DEAF.

At the close of the school term in June, 1917, Mr. Thomas P. Clarke, superintendent of this school, tendered his resignation, which was accepted, Mr. Clarke subsequently becoming superintendent of the Arkansas School for the Deaf. Mr. Walter M. Kilpatrick was appointed as his successor and assumed office August 1, 1917. Mr. Kilpatrick has had long experience as an instructor of the deaf in some of the largest and best schools in the United States and comes to us well recommended. At the time of his selection he was superintendent of the New Jersey School.

Improvements.

New School Building—A new light and sanitary school building has long been the need of this school. Forty thousand dollars was appropriated for this purpose. We were just able to erect the building, but have nothing left for furnishing and equipment. It is of brick construction, one story high, containing an office, supply room, sewing room, twelve class rooms, cooking school kitchen and dining room and auditorium. We are asking for \$4,000.00 to furnish and equip the building. This should by all means be granted.

Repairs—A repairs and replacement fund of \$2,700.00 was allowed for this biennium. This would not go far in such buildings as the old main structure. A new bake oven was built, the interior of the two dormitory buildings painted and the east stairway in the boys' building reconstructed. In the main building the plastering was repaired, the fire escapes strengthened, front porch painted, the walls of the front hall, east and west stairways, several side halls, school rooms and private rooms, hospital kitchen, pupils' dining room, employees' dining room, bakery, pantry, art room, etc., were redecorated and in most of them the woodwork also. Cement floors were patched and the old steps and runway on the west side of the building demolished. We are asking for \$5,000.00 to continue this work during the coming biennium.

Expenses of Students to Gallaudet College—The last appropriation for this purpose was \$2,000.00. The increased cost of transportation requires an additional \$500.00 this time.

STATE SCHOOL FOR THE BLIND.

With the funds granted by the last two sessions of the Legislature there has been constructed one of the most complete and efficient working plants

for the instruction of the blind children of the State that is to be found anywhere. A review of the reconstruction seems appropriate at this time.

Administration and School Building—In 1915 an appropriation of \$75,000.00 was made for a new school and administration building. It was built in front of the old building, which had served the state for many years. The new building is a beautiful structure from an architectural standpoint, built of Spokane brick, three stories and basement, and is fire-proof. At the present time it would cost at least \$125,000.00. It has been occupied since the date of the last biennial report. Of all the buildings erected by this board during the last two bienniums this is the only one where a contractor defaulted. The heating contractor failed to fulfill his contract. The bonding company waived its right to finish the work and we were compelled to do so by day labor. A large amount of defective work had to be removed in order that the heating system might be completed in accordance with the plans, specifications and contract. This was done at a cost in excess of the appropriation. The bonding company was called upon to make this good, but refused. The last Legislature was asked for an appropriation to pay the outstanding claims, which was granted. The full amount was subsequently paid by the bonding company, so that there was no loss to the State.

Kitchen and Equipment—Seventeen thousand dollars was allowed for a new kitchen and equipment. This has been built at the rear of the administration building and is of the same general construction. It contains the kitchen, pantries, vegetable room, bakery, refrigerator room, dining room for employees and quarters for cooks.

Shop Row—The shop row, also of the same construction as the main building, was erected west of the boys' dormitory. It is a one-story building, affording room for all of the boys' industrial work.

Old Administration Building—The old administration building, unsightly and unsanitary, has been wrecked, only the heating plant in the rear remaining. This removes an old eyesore and menace and leaves the way open to improvement of the grounds.

Boiler—A boiler was authorized and \$2,500.00 appropriated for its purchase and setting. The funds were insufficient for a new boiler and a second-hand one in good condition was purchased for \$1,500.00. It is a boiler of about 120 horsepower. The remaining \$1,000.00 will insure its proper setting.

Retaining Wall and Area Way—These have been constructed of concrete at the rear of the administration building.

Purchase of Land—The sum of \$10,000.00 was granted to purchase new land. One acre on the east, with a good eight-room house, and a tract of something less than five acres on the west were acquired at a total cost of \$9,575.00, leaving \$425.00 to revert to the treasury. It was deemed advisable to obtain title by condemnation. The matter was placed in the hands of the Attorney General, who handled the litigation through which the title was acquired.

STATE PENITENTIARY.

No institution began the fiscal period with as great a handicap as the State Penitentiary. Two hundred and fifty thousand four hundred dollars was requested for operation. This was cut to \$227,400.00 by the appropriation act, which was \$12,362.86 less than the cost of operating during the biennium which closed on September 30, 1916. It has been a most difficult problem, but we believe the institution will close the fiscal period without a deficiency.

Improvements.

A large number of improvements have been made during the biennium. These are nearly all of a minor character and too numerous to set out in detail. The largest expenditure was made in the erection and equipment of a new creamery building. This was done at a cost of \$2,000.00. The building is 46x58 feet and has equipment for making butter and cheese. At the time of making this report about 40 pounds of cheese and 30 pounds of butter are being made each day. The cheese has been more than sufficient for all State institutions and the butter has supplied all needs at the State Penitentiary and a part of those at the State Custodial School.

Steel Roof to Cell Wing, etc.—An appropriation of \$24,000.00 was made to place a steel roof over cell wings and toilets in cells and install a forced ventilating system and increased pumping facilities. Plans and specifications were prepared, but the price of steel, plumbing supplies and machinery had risen so high and the needs of the government for such articles had become so great that the work was not done.

Jute Mill.

Because of war conditions the jute mill has made a good showing. During the last biennium the average price paid for jute was \$24.72 per bale, while during the present biennium the average was \$40.57 per bale. The advance in the cost of jute and all other supplies and labor entering into the operation of the jute mill was met by the federal government in its allowance of a liberal differential in favor of wheat shipped in sacks over that in bulk shipment. There was a good market for grain bags at a reasonable profit to the State and the growers were given sacks at less cost than in previous years because of the differential in favor of the sacked wheat.

Prison Industry.

Some states—notably Michigan and Minnesota—have developed industries in their penal institutions that enable them to pay the men for their work and relieve the taxpayers of the burden of supporting the prisons by direct taxation. In states not so fortunate as those above mentioned a man is sent to prison for a term of years, his family suffers by the withdrawal of his support, if he has a family. He is required to work at some occupation unremunerative to himself and when released he goes out into the world penniless and broken in spirit, frequently turning to crime again. For this unhappy result the taxpayer has had to contribute during the period of confinement.

We have given much thought to the subject of industries for our penitentiary, because we believe that the time is at hand when Washington should begin to take definite steps in a plan to place its penal institutions in a class

with those of other progressive states. There has not been a time during the last four years when it would have been safe or have shown good business judgment to recommend any large investment of money to establish such industries. In August, 1914, the war in Europe began. This unsettled business conditions all over the world. When we entered the conflict this condition of uncertainty was accentuated. Manufacturing plants that have proven exceedingly profitable during these years will be mere junk after the termination of hostilities. Therefore, we have not any comprehensive plan to submit at this time. Should the war close in the near future and conditions return to normal we hope to be more successful during the coming biennium. We expect, however, to render a special report upon two proposed industries, viz., the manufacturing of motor license plates for the Secretary of State and the fabrication of woolen and cotton goods. The report on the latter industry will be contingent upon the termination of the war prior to the approaching legislative session.

In the meantime and as a preliminary to the development of profitable industries, we believe that the principle of compensation for prison labor should be established, leaving the details to be worked out when such industries are successfully established. We have recommended, therefore, in another part of this report, that legislation be enacted along this line.

STATE TRAINING SCHOOL.

On March 1, 1918, Dr. George A. Sheafe retired as superintendent to enter another line of work and Mr. Thomas P. Horn was selected as his successor.

The average population maintained during the biennium covered by this report was 148.78 as against 194.16 during the preceding two-year period. This decrease is partially due to the fact that for a period of six months in the first biennium the girls, who were subsequently sent to the State School for Girls, were included in the number and also to the wise policy being pursued by the juvenile courts in not sending boys to the institution if they can be reclaimed under the supervision of the probation officers.

Improvements.

Stock Barn—A barn for young stock has been built next to the dairy barn. This was constructed from materials purchased in this and the previous biennium, no special appropriation having been made. It was erected almost wholly by the labor of the boys. No floor has been placed in it yet. This will be done next year.

New Boiler—The sum of \$4,000.00 was allowed for a new boiler. The amount was not sufficient to procure a new boiler, but Dr. Sheafe succeeded in locating a second-hand boiler and stack, which were purchased for \$1,100.00. This purchase also included a large amount of fire brick. It cost approximately \$400.00 to transport and set the boiler and stack, making the total cost about \$1,500.00. This appropriation covered a number of other items and the amount allowed for boiler is not specified. This was a wise provision, as the other items will far exceed the estimate, and the saving on the boiler will absorb the increased cost of other improvements.

Silos—Two Playford cement stave silos—one 12x30 feet and the other 14x35 feet—were constructed. The sum of \$800.00 was granted for this

purpose. By furnishing the foundation, top and some labor we were able to get the two silos, with a total capacity of about 175 tons, within the appropriation.

Land Clearing and Draining—Some of the best land belonging to this school had never been cleared. Thirty acres of land were cleared, twenty-three of which were in crop this year. The matter of draining farm has been a subject of discussion for many years. A large ditch 1,800 feet long was dug. This is all that could be done with the money in hand. There is still required 1,200 feet of main ditch and a number of laterals. The proper drainage of this farm will add immeasurably to its productiveness, as the water always stands on it in the spring until it is too late for successful planting. We are asking for \$3,750.00 to finish the draining and clear the remaining twenty-five acres.

Remodeling Bakery—The bakery was located in a building detached from the main kitchen. It being in bad condition an appropriation was made to remodel it. It was decided to move it to the kitchen and combine the position of cook and baker. The business wisdom of this is apparent, as the saving in salary will soon pay all cost of removal. We purchased a steel oven and placed it in the kitchen. This will necessitate tearing out the partition between the scullery and kitchen, which will be done, and a new Welsh quarry tile floor laid. This will make a much needed improvement in the sanitary condition of bakery and kitchen.

General Improvements—A large number of improvements, large and small, have been made. Considerable painting and calcimining have been done; the school rooms remodeled; a garage built; repairs made to steam lines and plumbing system; new tables and chairs placed in dining room; broken windows replaced; the old shed in the rear of the shop row wrecked; chicken houses built; new laundry machinery, kitchen equipment, sewing machines and canning outfit installed, and a small Buick five-passenger touring car purchased for the use of the superintendent.

Needs of Institution.

The budget, as submitted to the Board of Finance, appears elsewhere in this report. This will show the funds we deem necessary for the coming fiscal period. We desire to call attention to one item appearing in the budget.

Repairs and Replacements—The sum of \$15,000.00 is a large amount to ask for repairs and replacements. However, an inspection of the institution will disclose the advisability of making such a large expenditure. The buildings are old, in bad condition and unsightly. We propose to paint both the interior and exterior. This alone will cost \$5,000.00. During the present biennium the buildings at the Western State Hospital were painted a light cream color. The improvement in appearance was so marked and the preservative value so great that we have felt it advisable to paint the buildings at this school. The present administration building is almost solely used for the superintendent's offices and residence. We are asking a capital outlay of \$5,000.00 to erect a residence for the superintendent. If this is granted the administration building could be remodeled and made into quarters for fifty small boys, thus affording a means of segregation which is indispensable if the best results are to be obtained. This will cost \$2,000.00.

The shop row is in need of new concrete floors and other improvements cost \$3,000.00, and the squad buildings need many repairs such as renewing of floors and stairways, etc. We trust that our request for these funds will be granted.

STATE SCHOOL FOR GIRLS.

The second biennium of the existence of this institution has justified its creation. The work accomplished during the period has been most satisfactory, the resume of which appearing in the report of the superintendent, made a part hereof, will furnish interesting and instructive reading to those interested in welfare work. It has been a severe disappointment that much of the improvement planned for this biennium could not be made because of the insufficiency of the funds appropriated.

New Cottage—The appropriation of \$50,000.00 made for a new cottage was inadequate for the completion of the building. In the preparation of the plans and specifications everything that could be eliminated without serious impairment was cut out. In spite of this the lowest bid received was \$58,657.00. The architect's fees and cost of inspection would have brought this up to \$62,000.00, which would allow nothing for furnishing. There were so many girls whom the different courts wanted to commit to the institution that we felt that some steps should be taken to erect a temporary building. We, therefore, employed an architect to prepare plans for a frame cottage to accommodate sixty girls, which cottage could subsequently be converted into a farm building. Plans were accordingly prepared for a structure to cost approximately \$40,000.00. This building was not constructed because we were able to relieve the congestion by the paroling of a large number of girls. The architect's fees were paid and the balance of the appropriation will revert. We are now asking for a new appropriation of \$75,000.00 to erect and furnish a cottage during the coming biennium. Should the war close before the next session of the Legislature we ask that provision be made for two such buildings.

Addition to Administration Building—When the administration building was constructed it was necessary to eliminate a portion of the building in the rear because of lack of funds. This space was planned for domestic science, weaving and sewing departments. The last appropriation act carried \$5,500.00 for this addition. The lowest bid received was \$12,093.00, which does not include architect's fees or inspection costs. The work was not done.

Power House, Heating and Power Plant and Railroad Spur—There was an appropriation of \$44,000.00 for these purposes. To give an idea of the advance in prices we shall cite the item "Railroad Spur." We received an estimate from the Northern Pacific Railway Company in February, 1917, of \$2,425.00 to put in a spur track from main tracks to the old power plant. When the spur was put in it cost a few dollars less than \$4,900.00 and we had to stop the work several hundred feet from the old power plant because the funds would not permit to make further expenditure. The lowest bid for building, stack, tunnels and equipment was \$81,200.00. After trying in various ways to have the cost reduced, we decided to eliminate the tunnels, electric equipment, concrete stack and permanent building. Early in the biennium we purchased two boilers ourselves in order that we might be

sure to have them on time. This was a wise move, as it soon became very difficult to secure boilers and the price advanced quite materially. We then determined to construct the building by day labor, transferring a second-hand steel stack from the Northern State Hospital. The furnishing and installation of the heating equipment were let by contract. The foundation, basement and floors of the building are of permanent construction and will serve for all time. The walls are of wood construction. When the funds are available the brick walls and tile roof can be placed around the plant. Funds for an electrical unit will have to be furnished this year, and with this addition the plant will be adequate for many years.

Bulkheading River and Building Bridges—The Chehalis river has been gradually washing away a portion of the institution land. A system of bulkheading has just been completed which should prevent further loss of land. Three bridges from the uplands where the institution buildings are located to the farm are nearing completion.

Greenhouse, Cover Over Entrance to Granger Hall and Post Lamps—None of these improvements has been completed, but all will be finished before the expiration of the fiscal period.

WASHINGTON STATE REFORMATORY.

This institution is under dual management. The law places its business affairs in the hands of the Board of Control and the reform work in the Board of Managers. By appointment of the governor the three members of this board constitute three of the five members of the Board of Managers. In view of this fact and the further fact that anything reported here would be a useless duplication of the report of the Board of Managers, reference is made to the latter report for information concerning the business management, as well as the reform work.

RECOMMENDATIONS FOR LEGISLATION.

1. We recommend that the salaries of the superintendents of the State Penitentiary and State Custodial School be increased to \$3,000.00 per annum. The salary of the superintendent of the State Penitentiary is now \$1,800.00, while at the State Reformatory, an institution with less than half the population, \$3,000.00 is paid for the same position. This increase should be granted. The salary of the superintendent of the State Custodial School is fixed by law at \$1,200.00. The last Legislature inserted a provision in the appropriation act that the salary should be \$200.00 per month. This will become inoperative on April 1, 1919. There should be a permanent statute and the amount should not be less than \$3,000.00. The superintendent of the Veterans' Home is paid \$1,800.00 per year, while the head of the Soldiers' Home receives only \$1,250.00. The latter position should be raised to the same amount as the former.

2. The applications for admission to our Soldiers' Homes have become so numerous that it is no longer possible to care for all applicants. The State must either provide and continue to provide greatly increased facilities or it must further restrict admissions. The drift is west and an examination of the applications will disclose that a large percentage of those applying have lived in the State just the required time. In fact, many of them in conversation say that they have come to secure the benefits of the homes. This inevitably deprives many of the older residents of the privileges, which should be granted them without delay.

In our judgment it would be wise to require a residence of five years in the State before the applicant could become eligible; provided, however, that any soldier who was a resident at the time of his enlistment or selection should always be eligible, regardless of residence.

3. It is the opinion of alienists that many persons suffering from nervous diseases which threaten mental disorder could be saved a complete mental breakdown and ultimate commitment to a hospital for the insane if they could receive treatment from specialists in mental and nervous cases at the inception of their illness. Two years ago we recommended an appropriation for the erection of a psychopathic ward at the Western State Hospital, to be followed by the enactment of a law providing that such persons may voluntarily place themselves under the care of the hospital, the rules, regulations and price to be paid to be left to the State Board of Control. On account of the prohibitive cost of building we did not include in our budget a request for a psychopathic ward, but we desire to keep our recommendation alive in order that proper legislation may be enacted when conditions return to normal.

4. In another part of this report we have discussed the work of deporting non-resident insane. It would be a great assistance to us in performing this task if we had authority to enter into reciprocal agreements with other states for the mutual return of patients. The State of Washington would profit by such an agreement. We, therefore, recommend that a law be enacted authorizing this board to enter into agreements with other states and that we be granted authority to give consent for the return of any resident of the State confined in an insane hospital in another state, if

such state reciprocates by accepting its own residents who are confined in our institutions. This statute should be broad enough to include feeble minded. There should also be a provision making the bringing of an insane or feeble minded person into the State without the consent of the State Board of Control a felony.

5. Under the present law the Secretary of State, State Auditor and State Treasurer constitute the Public Property Commission, which, by and with the consent of the governor, has authority to sell any personal property belonging to the State, for which there is no further use, the moneys realized from such sale being turned into the general fund of the state treasury. This board, having charge of the State Capitol, Temple of Justice and twelve institutions, has more property to sell than any other department. We think it would be wise to vest in the board the duties of the Public Property Commission. This is agreeable to the three members of the present commission. We also recommend that power be given to exchange articles for other personal property of equal value. The reason for this is apparent. It frequently happens that we have farm products that cannot be sold to advantage, but can be exchanged for other things needed. Stock can sometimes be exchanged. Automobiles, trucks and machinery can be renewed if there is authority to apply the old equipment as part payment on new. This is constantly being done in the course of private business and the State's business should not be less efficient.

6. We have a large amount of money at the different institutions which belonged to former inmates who are dead or have not been heard from for many years. We recommend suitable legislation for escheating these funds.

7. We recommend a law making it a felony to assist an inmate of a state institution to escape.

8. Many inequalities arise from the administration of the present indeterminate sentence law. Men come to penal institutions under varying sentences—one for a minimum time of five years, while another, who has committed a more aggravated crime, has only six months between him and the authority of the parole authorities to act. It is very difficult to arouse a responsive spirit in the first man, who feels that he has been the victim of injustice. The chances are very great that he will leave the institution embittered against society and law and order. We believe that the law should fix the minimum and maximum in every case so that all men would come into the penal institutions on a common basis. The boards having power to grant paroles could then say when they are in condition to return to society. In this connection we feel that a law granting the courts authority to parole adult offenders from the bench and another creating the position of public defender would be desirable enactments.

In closing we desire to express our appreciation of the continued confidence, support and assistance of His Excellency, Governor Ernest Lister, which have been invaluable to us in the discharge of the many onerous duties that have devolved on us during the past two years.

We are also glad to make acknowledgement of the co-operation on the part of the institution superintendents and the other departments of the State government.

STATE BOARD OF CONTROL.

List of members and employees, showing annual salaries.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
T. E. Skaggs.....	Chairman	\$2,000 00
W. H. Cochran.....	Member	3,000 00
G. Dowe McQuesten	Member	3,000 00
G. W. Belt.....	Secretary	2,000 00
H. N. Bouley.....	Auditor	1,680 00
Jessie M. Watson.....	Stenographer	1,380 00
Hazel Maahs.....	Stenographer	1,020 00
Dr. H. C. Krieger.....	Dentist	1,800 00
Agnes Webb	Traveling Attendant, Western State Hospital.....	840 00
F. R. Thompson.....	Traveling Attendant, Western State Hospital.....	840 00
J. C. Black.....	Assistant Traveling Attendant, Western State Hospital.....	780 00
Anna Spangler	Traveling Attendant, Eastern State Hospital.....	840 00
W. E. Selix.....	Traveling Attendant, Eastern State Hospital.....	840 00
W. A. Thomas.....	Traveling Attendant, Eastern State Hospital.....	780 00
Walter Aegerter	Traveling Attendant, Northern State Hospital.....	840 00
Ida Towslee	Traveling Attendant, Northern State Hospital.....	840 00
Holatio Crosno	Traveling Guard, State Penitentiary.....	1,500 00
H. W. Horton.....	Traveling Guard, State Penitentiary.....	1,500 00
J. F. Laythan.....	Parole Officer, State Reformatory.....	1,500 00
J. Howard Shattuck.....	Parole Officer, State Reformatory.....	1,500 00
P. M. Laizure.....	Assistant Parole Officer, State Reformatory.....	900 00
Sade Houser	Parole Officer, State School for Girls.....	1,200 00
B. H. German.....	Parole Officer, State Penitentiary.....	1,680 00

List of officers and employees of the institutions under the supervision of the State Board of Control and salaries paid, as per schedule adopted April 1, 1918.

WESTERN STATE HOSPITAL.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
J. B. Laughary.....	Acting Superintendent.....	\$4,000 00
W. V. Gullik.....	First Assistant Physician.....	2,500 00
C. R. Dever.....	Second Assistant Physician.....	2,000 00
Mary F. Perkins.....	Third Assistant Physician.....	1,800 00
A. McLean	Chief Engineer.....	1,500 00
O. D. Foley	Accountant	1,200 00
V. W. Richards.....	Stockman	1,200 00
A. J. Houck.....	Mason	1,080 00
H. L. Ingram.....	Plumber	1,080 00

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
E. E. Macklin.....	Supervisor	1,080 00
Sam Weir	Carpenter	1,020 00
Walter Hatcher	Cook	1,080 00
W. J. McMurray.....	First Assistant Engineer.....	1,020 00
W. Petrie	Storekeeper	1,020 00
J. Winterhalter	Baker	900 00
Henry Rossler	Florist	900 00
John Lesko	Gardener	900 00
Iva Osborn	Matron	900 00
J. W. Gish.....	Assistant Supervisor	840 00
A. N. Davison.....	Assistant Stockman.....	840 00
E. Nelson	Tinsmith	840 00
F. J. Watson	Laundryman	840 00
J. G. Paquette	Second Assistant Engineer.....	840 00
Carrie M. Anderson.....	Clerk and Stenographer.....	840 00
W. B. Treacle	First Assistant Cook	780 00
Chas. Runquist	Second Assistant Cook	720 00
J. H. Evans	Third Assistant Cook	720 00
D. Lew Paramore.....	Druggist	720 00
James F. Green.....	Fireman	720 00
C. A. Stevenson.....	Fireman	720 00
Nellie Pridmore.....	Seamstress	720 00
Evelyn Culbertson	Attendant	660 00
Clara Weir	Attendant	660 00
Lucy Hunt	Attendant	660 00
Ida Moe	Attendant	660 00
Princess McGrady	Attendant	660 00
Lottie Black	Attendant	660 00
Louise Kirtley	Attendant	660 00
Rose Hlner	Attendant	660 00
Edna Tupps	Attendant	660 00
H. G. Moe	Attendant	660 00
G. H. Stucker.....	Attendant	660 00
F. B. Hammond.....	Attendant	660 00
Chas. Ruby	Attendant	660 00
Albert Maass	Attendant	660 00
William Budkie	Attendant	660 00
Fred Mattson	Attendant	660 00
Jack Atkinson	Attendant (Hydro).....	660 00
Jule Ruby	Attendant (Hydro).....	660 00
L. A. McKee.....	Teamster	660 00
Jessie Laidlaw	Attendant	600 00
Lillian Riley	Attendant	600 00
Lida Hubbard	Attendant	600 00
Addie Bjornson	Attendant	600 00
Mary Richmond	Attendant	600 00
Clona Duke	Attendant	600 00
Margaret Hough	Attendant	600 00
Loretta Crouse	Attendant	600 00
Helen Polson	Attendant	600 00
Emma Clements	Attendant	600 00
Etta Black	Attendant	600 00
Margaret Treacle	Attendant	600 00
Mary Broz	Attendant	600 00
Mary Budkie	Attendant	600 00
Mary Scholtens	Attendant	600 00
Elizabeth Gish	Attendant	600 00
Anna Macklin	Attendant	600 00
V. N. Davis.....	Attendant	600 00
Clarence Rogers	Attendant	600 00
George Richie	Attendant	600 00

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
A. F. Mathis.....	Attendant	600 00
Ed Black	Attendant	600 00
J. J. Barry.....	Attendant	600 00
Chas. Stewart.....	Attendant	600 00
E. B. Swartz.....	Attendant	600 00
Roy McAfee	Attendant	600 00
J. A. Furnas.....	Attendant	600 00
R. L. Hughes.....	Attendant	600 00
L. M. Packard.....	Attendant	600 00
James T. Quinn.....	Attendant	600 00
A. J. Frame.....	Attendant	600 00
Jacob Kobetich	Janitor	600 00
Julla Christopherson	Laundress	600 00
Elizabeth Long	Stenographer	600 00
J. R. Stuber.....	Truck Driver.....	600 00
Elizabeth McGraw	Attendant	540 00
Emma Davis	Attendant	540 00
Edna Gossage	Attendant	540 00
Sadie Murphy	Attendant	540 00
Mary O'Roark	Attendant	540 00
Sarah Moore	Attendant	540 00
Blanche Maharrey	Attendant	540 00
Mable Scott	Attendant	540 00
Alice Berven	Attendant	540 00
Alice Mathis	Attendant	540 00
Ella Stucker	Attendant	540 00
Margaret McCormick	Attendant	540 00
Alice Moffett	Attendant	540 00
Lillian McCormick	Attendant	540 00
Sophia Muhlbier	Attendant	540 00
Linda Barry	Attendant	540 00
Lulu Spence	Attendant	540 00
Elizabeth Herridge	Attendant	540 00
Louise Hoffman	Attendant	540 00
Margaret Hyland	Attendant	540 00
Nellie Thompson	Attendant	540 00
Edith Riggle	Attendant	540 00
Lulu Stewart	Attendant	540 00
Lucile Richle	Attendant	540 00
Mary Rogers	Attendant	540 00
Carrie Merrill	Attendant	540 00
Emma Furnas	Attendant	540 00
Ida Hughes	Attendant	540 00
Ella Maass	Attendant	540 00
Hattie McAfee	Attendant	540 00
May Swartz	Attendant	540 00
Della Radford	Attendant	540 00
Barbara Evans	Attendant	540 00
G. D. Ferrell.....	Attendant	540 00
Lewis Katz	Attendant	540 00
F. Riggle	Attendant	540 00
O. B. Merrill.....	Attendant	540 00
J. B. Spence.....	Attendant	540 00
Nels Nelson	Attendant	540 00
A. F. Middlested.....	Attendant	540 00
Quintis Radford	Attendant	540 00
M. E. Radford.....	Attendant	540 00
T. E. McCann.....	Attendant	540 00
Joe McGregor	Attendant	540 00
G. D. Ferrell.....	Chauffeur	540 00
Mable Wheeler	Attendant	480 00

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Jean Mussatto	Office Girl	480 00
Alice Albright	Waitress	480 00
Lily Jensen	Housekeeper	480 00
Eldah Watson	Laundress	420 00
Mrs. Hesseltine	Laundress	420 00
Florence McGraw	Waitress	390 00
Lena Boynton	Waitress	390 00
Jeanette Lamarra	Laundress	390 00
Catherine Rivers	Waitress	390 00
H. H. Abram.....	Minister	260 00

EASTERN STATE HOSPITAL.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
A. S. Oliver, Jr.....	Superintendent	\$4,000 00
M. W. Conway.....	Physician	2,500 00
J. C. Boyle.....	Assistant Physician.....	2,000 00
Theo. Scholer	Engineer	1,620 00
D. G. Wakefield.....	Accountant	1,200 00
T. W. Pedigo.....	Cook	1,080 00
Geo. B. Webster.....	Farmer	1,080 00
John W. Fishback.....	Supervisor	1,080 00
E. Goetchius	Storekeeper	960 00
Katherine Dean	Matron	900 00
Robert Laechelt	Baker	840 00
Fred Ully	Gardener	840 00
Sam Lemey	Laundryman	840 00
Fred Gilbreth	Stockman	840 00
James Moore	Stockman	840 00
W. F. Hill.....	Florist	780 00
Gertrude Bruckner	Clerk	780 00
Arthur Scott	Assistant Cook.....	720 00
Peter Peterson	Assistant Farmer.....	720 00
W. B. Phillips.....	Fireman	720 00
P. M. Peterson.....	Poultryman	720 00
Dave Beck	Assistant Farmer.....	660 00
P. J. Opers.....	Assistant Laundryman.....	660 00
F. L. Lewis.....	Teamster	660 00
Ivan Berge	Attendant	660 00
Stella Brogan	Attendant	660 00
Gertrude Bangle	Attendant	660 00
O. D. Bolster.....	Attendant	660 00
C. G. Beach.....	Attendant	660 00
W. F. Hiner.....	Attendant	660 00
A. E. Archibald.....	Attendant	660 00
Opal Veach	Attendant	660 00
A. D. Hughes.....	Attendant	600 00
John Shea	Attendant	600 00
W. W. Moorman.....	Attendant	600 00
A. J. Sweet.....	Attendant	600 00
Minnie Sweet	Attendant	600 00
Bertha Galvin	Attendant	600 00
Louise Bunds	Attendant	600 00
W. J. Purchase.....	Attendant	600 00
John Carlton	Attendant	600 00
Hildora Hansen	Attendant	600 00
Beatrice Laidlaw	Attendant	600 00
Anna Anderson	Attendant	600 00
Nina Green	Attendant	600 00
Zella Stroud	Attendant	600 00
A. Kirkwood	Attendant	600 00

Name	Position	Salary Per Annum
Edith Kirkwood	Attendant	600 00
E. J. Wademan	Attendant	600 00
Peter Earle	Attendant	600 00
A. V. Meadows	Attendant	600 00
T. G. Speak	Attendant	600 00
Grace Tadlock	Attendant	600 00
Esther Harter	Attendant	600 00
J. W. E. Johnson	Attendant	600 00
M. R. Fellows	Assistant Cook	600 00
Olive Peterson	Assistant Cook	600 00
Emily Brown	Laundress	600 00
Anna Wees	Seamstress	600 00
T. J. Whalen	Janitor	600 00
Ed Tesch	Truck Driver	600 00
W. Clark	Assistant Gardener	540 00
Albert Myers	Assistant Gardener	540 00
Margaret Holler	Attendant	540 00
Jane Murray	Attendant	540 00
Florence Plasterer	Attendant	540 00
Reka Anderson	Attendant	540 00
Walter Fleet	Attendant	540 00
Jennie Scott	Attendant	540 00
U. M. Gatewood	Attendant	540 00
Minnie Gatewood	Attendant	540 00
Willie Sweeney	Attendant	540 00
B. E. Gosney	Attendant	540 00
Minnie Gosney	Attendant	540 00
Stella Peel	Attendant	540 00
R. A. Harter	Attendant	540 00
Duncan Hull	Attendant	540 00
Evelyn Meadows	Attendant	540 00
W. D. Moore	Attendant	540 00
Essie Judd	Attendant	540 00
Inez Wademan	Attendant	540 00
Cuma Gilbert	Attendant	540 00
Mary Koenig	Attendant	540 00
J. W. Beck	Attendant	540 00
Geo. S. Teese	Attendant	540 00
Etta Teese	Attendant	540 00
Dennis Gates	Attendant	540 00
Francis Laurent	Attendant	540 00
James Miller	Attendant	540 00
Edgar Blackwell	Attendant	540 00
R. W. Durant	Attendant	540 00
Cora Diegnau	Attendant	540 00
Georgia Kloe	Attendant	540 00
John Kloe	Attendant	540 00
Ira Henshaw	Attendant	540 00
A. F. Sullivan	Attendant	540 00
Jennie Sullivan	Attendant	540 00
N. Lemons	Attendant	540 00
Amy Lemons	Attendant	540 00
J. F. Hamner	Attendant	540 00
J. D. Ferrell	Attendant	540 00
Iva Carlton	Attendant	540 00
Nellie Burke	Housekeeper	480 00
Ida Magnuson	Assistant Laundress	480 00
Edna Bangle	Waitress	390 00
O. B. Whitmore	Chaplain	300 00

NORTHERN STATE HOSPITAL.

Name	Position	Salary Per Annum
J. W. Doughty	Superintendent	\$4,000 00
H. D. Miller	First Assistant Physician	2,500 00
Edward Bollinger	Second Assistant Physician	2,000 00
F. G. A. White	Engineer	1,500 00
F. A. Crane	Accountant	1,500 00
F. G. Purington	Dietician	1,200 00
J. J. Corrigan	Farmer	1,200 00
Chris Sheik	Plumber	1,080 00
M. W. Roby	Supervisor	1,020 00
J. A. Wright	Carpenter	960 00
Geo. Rigney	Cook	960 00
D. C. Hunter	First Assistant Engineer	960 00
Robert Taylor	Baker	900 00
Peter Fyfe	First Assistant Farmer	900 00
Kate Kean	Matron	900 00
F. A. Robinson	Painter	900 00
T. J. Morrow	Storekeeper	900 00
John T. Rigney	First Assistant Cook	840 00
L. H. Pratt	Florist	840 00
Guy Jones	Second Assistant Engineer	780 00
Frank Thompson	Fireman	720 00
Vincent Grosjacques	Fireman	720 00
Glen Jones	Fireman	720 00
Helen Teller	Druggist	660 00
John Sloday	Teamster	660 00
Thomas J. Banks	Attendant	660 00
M. B. Byland	Attendant	660 00
A. McGowan	Attendant	660 00
Kate Pritchett	Attendant	660 00
M. Teehan	Attendant	660 00
R. W. Durant	Attendant	660 00
Elizabeth O'Neil	Attendant	660 00
E. M. Roberts	Attendant	660 00
Kate Anderson	Attendant	660 00
Arthur E. Cowden	Attendant	660 00
Nellie Gregory	Attendant	660 00
Fred Bernhard	Attendant	660 00
B. Sommerville	Attendant	600 00
M. F. Teehan	Attendant	600 00
John Kean	Attendant	600 00
Annie McGowan	Attendant	600 00
A. C. Dilley	Attendant	600 00
Frank Moore	Attendant	600 00
Joseph Matowsky	Attendant	600 00
Emily Kennedy	Attendant	600 00
Nellie M. Quinn	Attendant	600 00
Mary Boyle	Attendant	600 00
Gus L. Leftwich	Attendant	600 00
C. Larson	Attendant	600 00
Roy Collins	Attendant	600 00
Frances Dalgleish	Attendant	600 00
Anna Simonson	Attendant	600 00
Alice Roberts	Attendant	600 00
W. J. Sargent	Attendant	600 00
T. E. Rowland	Attendant	600 00
Chas. Kellner	Attendant	600 00
R. A. Collins	First Assistant Baker	600 00
J. G. Camacho	Second Assistant Cook	600 00
Mrs. R. H. Myers	Third Assistant Cook	600 00

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Margaret Simonds	Laundress	600 00
Emma Wilks	Stenographer	600 00
Gladys Carpenter	Attendant	540 00
Florence L. Leftwich	Attendant	540 00
Thomas Smith	Attendant	540 00
P. G. Gleeson	Attendant	540 00
W. M. D. Riggs	Attendant	540 00
Lucile O'Connor	Attendant	540 00
Josie Roby	Attendant	540 00
M. T. McDonough	Attendant	540 00
Nellie Collins	Attendant	540 00
Lloyd Upper	Attendant	540 00
Ernest Covell	Attendant	540 00
Jennie Carp	Attendant	540 00
Azella Nott	Attendant	540 00
Mary Neiles	Attendant	540 00
Ed O'Conner	Attendant	540 00
Ida Dodge	Attendant	540 00
Mamie Gillespie	Attendant	540 00
Hilda Sargent	Attendant	540 00
Katherine Rowland	Attendant	540 00
L. Sommerville	Attendant	540 00
L. Katz	Attendant	540 00
Sophie Muhlbrier	Attendant	540 00
Winifred Kellner	Attendant	540 00
Eva Highley	Housekeeper	480 00
Ida Bean	Assistant Laundress	420 00
Millie Kuhnle	Waitress	390 00
Myrtle Bice	Waitress	390 00

STATE CUSTODIAL SCHOOL.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
S. C. Woodruff	Superintendent	\$2,400 00
E. F. Bowlby	Physician	1,500 00
Rex R. Walsh	Accountant	1,200 00
Roscoe Reid	Engineer	1,200 00
Carrie Brady	Cook	900 00
J. L. Lay	Assistant Engineer	900 00
Gertrude Conkie	Baker	780 00
Jessie Reid	Assistant Cook	780 00
Luda V. Hull	Assistant Cook	780 00
Henry Dennison	Farmer	720 00
F. M. Hunter	Laundryman	720 00
Alice Walsh	Laundress	720 00
C. A. Jacobs	Supervisor	720 00
Joye Guyer	Supervisor	720 00
Adelaide K. Hamilton	Teacher	660 00
Louise Fowler	Teacher	660 00
A. E. Fisher	Teacher	660 00
Ruth Mead	Teacher	660 00
Hilda M. Mannila	Teacher	660 00
Lois Whitaker	Teacher	660 00
Edwin Leech	Fireman	600 00
Edith M. Woodruff	Matron	600 00
C. G. Boyd	Truck Driver	600 00
A. M. Jacobs	Attendant	600 00
John Foster	Attendant	600 00
J. A. Woods	Attendant	600 00
Carrie Rawson	Attendant	600 00

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Sue Kribbs	Attendant	600 00
J. A. Palmer	Attendant	600 00
B. T. Hunter	Attendant	600 00
G. A. Calhoun	Attendant	600 00
J. A. Kinsey	Attendant	600 00
W. M. Navert	Attendant	600 00
W. D. Moore	Attendant	600 00
Thomas Burns	Attendant	600 00
Ida Bauer	Attendant	540 00
M. E. Jones	Attendant	540 00
Duncan Hallett	Attendant	540 00
Trellis Dillsavor	Attendant	540 00
Arietta Foster	Attendant	540 00
Freda Bauer	Attendant	540 00
Mrs. G. A. Calhoun	Attendant	540 00
Cora Ashley	Attendant	540 00
Susie Woods	Attendant	540 00
Mary Plank	Attendant	540 00
Edna Palmer	Attendant	540 00
Clara Signor	Attendant	540 00
Anna Simonton	Attendant	540 00
May Gilbert	Attendant	540 00
Ella Reid	Attendant	540 00
Stella Reid	Attendant	540 00
Mrs. W. M. Navert	Attendant	540 00
Blanche Hemsley	Attendant	540 00
Cora Diegnau	Attendant	540 00
Irene Senkovitz	Attendant	540 00
Mary Bowlby	Attendant	540 00
M. B. Keyes	Attendant	540 00
Inger Lund	Attendant	540 00
Mamie Dinneen	Attendant	540 00
Edith Breslin	Attendant	540 00
Emil Virgin	Assistant Farmer	540 00
Jessie Motheral	Stenographer	480 00
E. W. Gurr	Teamster	480 00
Ethel Harrison	Waitress	420 00
Mrs. J. L. Lay	Waitress	420 00
Chas. Dean (inmate)	Kitchen Helper	60 00
Dominac Garvis (inmate)	Fireman	60 00
Bert Willisroft (inmate)	Fireman	60 00
Frank Day (inmate)	Fireman	30 00
Tom Love (inmate)	Fireman	30 00

STATE SOLDIERS' HOME.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Ed. C. Warner	Superintendent	\$1,250 00
S. A. D. Wilson	Adjutant	1,500 00
F. J. Clark	Engineer	1,200 00
A. I. Mitchell	Physician	840 00
A. Fribley	Cook	720 00
Franklin Miller	Cook	720 00
Dora R. Hughes	Stenographer	660 00
John Cronmiller	Baker	600 00
J. J. McKenzie	Fireman	600 00
Ben Deering	Fireman	600 00
C. W. Kelley	Fireman	600 00
Mrs. Alice Warner	Matron	600 00
John Maitland	Farmer	600 00
J. B. Shaw	Stockman	480 00

Name	Position	Salary Per Annum
Latta I. Records.....	Housekeeper	420 00
A. Clarke	Storekeeper	420 00
E. B. Haines.....	Laundress	360 00
J. O'Mara	Nurse	360 00
Mrs. Olive Welch.....	Nurse	360 00
Mrs. Lena Thackery.....	Nurse	360 00
I. N. Hall.....	Nurse	360 00
A. C. Johnson.....	Nurse	360 00
Ole Field	Steward	360 00
R. H. Morselander.....	Assistant Cook.....	300 00
Mary Miller	Assistant Cook.....	300 00
J. W. W. Polson.....	Laundryman	300 00
Albert O'Connor	Captain	300 00
S. O'Morrow	Waiter	288 00
Lena Jaehing	Waitress	288 00
Sophia Mathews	Waitress	288 00
Emma Dean	Waitress	288 00
Tilla Pungratz	Waitress	288 00
Eva Daniels	Waitress	288 00
John Patty	Assistant Baker.....	240 00
F. P. Hardy	Dishwasher	240 00
L. W. Britto.....	Assistant Laundryman.....	240 00
Anna Trimble	Assistant Laundress.....	240 00
J. M. Ewing	Day Officer.....	240 00
H. M. Guptill.....	Captain	180 00
C. D. Jones.....	Captain	180 00
T. W. Evans.....	Captain	180 00
Chas. P. Smith.....	Captain	180 00
Chas. Pettis	Captain	180 00
S. L. McDonald	Dishwasher	180 00
W. R. Shepherd.....	Dishwasher	180 00
Frank Cardinell	Dishwasher	180 00
R. C. Welch	Fatigue Sergeant.....	180 00
Renwick Brown	Florist	180 00
John A. Barry.....	Night Watchman.....	180 00
W. F. Murray	Shoemaker	180 00
Jonas Williams	Scrubber	180 00
R. Heltzman	Laborer	180 00

WASHINGTON VETERANS' HOME.

Name	Position	Salary Per Annum
John J. See.....	Superintendent	\$1,800 00
E. A. Landolt.....	Adjutant	1,440 00
J. D. MacLean.....	Physician	1,440 00
Chas. Hilt	Cook	1,020 00
Hannah Hilt	Cook	1,020 00
Paul Evers	Baker	900 00
Annie See	Matron	780 00
Edith E. Payne.....	Trained Nurse.....	720 00
Clara B. Collins.....	Trained Nurse.....	720 00
Jeanette C. Kast.....	Nurse	720 00
Flora I. Shively.....	Stenographer	660 00
N. J. Bendon.....	Assistant Cook.....	600 00
Frank E. Wilson.....	Assistant Cook.....	600 00
Grace M. Cheever.....	Cook (Diet Kitchen).....	600 00
Tom Scott	Fireman	600 00
C. J. Bjarlo.....	Fireman	600 00
William M. Dean.....	Day Nurse.....	600 00
George A. Haggerty.....	Day Nurse.....	600 00

Name	Position	Salary Per Annum
Alfred W. Frazier.....	Day Nurse.....	600 00
Edward Harrington.....	Night Nurse.....	540 00
George E. Kimball.....	Janitor.....	480 00
Ernestine Gambrell.....	Day Nurse.....	480 00
W. A. Butler.....	Truck Driver.....	480 00
Claire Butler.....	Stewardess.....	420 00
Ethel M. Galloupe.....	Waitress.....	420 00
Dora Perry.....	Housekeeper.....	360 00
Elsie Armstrong.....	Night Nurse.....	360 00
Maggie Wright.....	Waitress.....	360 00
Amenda V. Parker.....	Waitress.....	360 00
Gertrude Adema.....	Waitress.....	360 00
Ida Wilson.....	Waitress.....	360 00
M. J. Hodge.....	Waitress.....	360 00
Nancy J. Bagby.....	Waitress.....	360 00
Mary J. Davis.....	Waitress.....	360 00
Marian Hirst.....	Waitress.....	360 00
Mary Pike.....	Waitress.....	360 00
Z. Hodge.....	Assistant Baker.....	300 00
E. D. Stowe.....	Dishwasher.....	300 00
J. W. Heritage.....	Laundryman.....	300 00
Mary Willard.....	Laundress.....	300 00
C. H. Dix.....	Dishwasher.....	240 00
Oliver Demmons.....	Dishwasher.....	240 00
A. Chapman.....	Dishwasher.....	240 00
B. B. Coombs.....	Dishwasher.....	240 00
Florry Cooksom.....	Diet Room Girl.....	240 00
Sarah Butler.....	Janitress.....	240 00
Anna E. Spurgeon.....	Janitress.....	240 00
John McFadgen.....	Assistant Laundryman.....	240 00
Belle Murphy.....	Laundress.....	240 00
Emma Lewis.....	Laundress.....	240 00
Dolly Murgatroyd.....	Laundress.....	240 00
Hester Cook.....	Laundress.....	240 00
Hattie Lamereux.....	Day Nurse.....	240 00
H. C. Keeler.....	Storekeeper.....	240 00
George White.....	Wharfinger.....	240 00
F. H. Goddard.....	Barracks Captain.....	180 00
W. S. Covill.....	Barracks Captain.....	180 00
Sarah J. Milligan.....	Barracks Captain.....	180 00
John H. Creamer.....	Diet Room Man.....	180 00
W. J. Salisbury.....	Vegetable Cleaner.....	120 00

STATE SCHOOL FOR DEAF.

Name	Position	Salary Per Annum
Walter M. Kilpatrick.....	Superintendent.....	\$1,800 00
L. A. Divine.....	Teacher.....	1,500 00
T. F. Mosley.....	Teacher.....	1,500 00
W. S. Hunter.....	Teacher.....	1,260 00
Elizabeth S. Kilpatrick.....	Matron.....	1,080 00
James Hall.....	Engineer.....	1,020 00
Alice M. Alcorn.....	Teacher.....	960 00
Alex McDonald.....	Teacher.....	900 00
Edwin Johnson.....	Teacher.....	900 00
Cora M. Whitchee.....	Teacher.....	840 00
Pearl Koogle.....	Accountant.....	840 00
J. H. Elsner.....	Cook.....	840 00
A. W. Schoonover.....	Fireman.....	780 00
N. M. Wilson.....	Laundryman.....	780 00
Miriam Caton.....	Teacher.....	780 00

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Margaret Chisholm	Teacher	780 00
Maude Lester	Teacher	780 00
Sam Rice	Farmer	720 00
Henry Walker	Supervisor	720 00
Alice Rhoades	Teacher	720 00
Belle Devine	Teacher	720 00
C. C. B. Cooke.....	Teacher	720 00
Elsie Peterson	Teacher	660 00
Edwin Johnson	Laundryman	600 00
John W. Goheen	Assistant Engineer.....	600 00
Elizabeth Ashley	Supervisor	540 00
Emma James	Supervisor	540 00
Virginia Christy	Assistant Cook.....	480 00
Thelka Langdon	Night Watch.....	480 00
Annie Harris	Nurse	480 00
Lulu Derr	Supervisor	480 00
Anna Wechner	Laundress	420 00
Icophene Clendenning	Maid	420 00
Mable Langdon	Maid	420 00
Nelly Reed	Maid	420 00
Geo. Schoonover	Janitor	420 00
Myrtle Converse	Waitress	420 00
Emma Bryant	Cook's Helper.....	360 00
U. Lieser	Physician	360 00

STATE SCHOOL FOR BLIND.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Sadie E. Hall.....	Superintendent	\$1,800 00
Gus Priebe	Engineer	960 00
Agnes L. Ferguson.....	Secretary	900 00
Lois Heath	Cook	840 00
Nellie Gell	Literary Teacher.....	840 00
Mary E. Tate.....	Literary Teacher.....	840 00
Selma J. Nixon.....	Literary Teacher.....	840 00
Mildred Curtis	Literary Teacher.....	840 00
Bessie M. Sorrells.....	Piano Teacher.....	840 00
John Knight	Violin Teacher.....	840 00
Jennie G. Harris.....	Matron	720 00
Harold B. Deming.....	Industrial Teacher (Boys).....	720 00
Erma Marsh	Industrial Teacher (Girls).....	600 00
D. W. Kimball.....	Janitor	600 00
R. G. Creelman.....	Night Watchman.....	600 00
Emma Hickey	Boys' Supervisor.....	540 00
Lydia Seipp	Girls' Supervisor.....	540 00
Agnes Danielson	Assistant Cook.....	480 00
Bertha Peyton	Maid	480 00
Josephine Smith	Maid	480 00
Grace Upson	Maid	480 00
Virginia Christy	Laundress	360 00
Myrth Hover	Laundress	360 00
Hazel Haven	Maid	360 00
M. U. Lieser.....	Physician	240 00

STATE PENITENTIARY.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Henry Drum	Superintendent	\$1,800 00
Henry Drum	Chairman Prison Board.....	1,200 00
D. E. Nickelson.....	Warden's Clerk.....	1,800 00
B. L. Jones.....	Physician	1,800 00

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
J. T. Burke.....	Assistant Superintendent.....	1,620 00
S. Chandler	Acting Chief Turnkey.....	1,500 00
S. D. McCauley.....	Superintendent Jute Mill.....	1,500 00
T. J. Cannon.....	Chaplain	1,200 00
Thomas Prescott	Night Chief Turnkey.....	1,080 00
J. S. Reid.....	Assistant Superintendent Jute Mill..	1,080 00
R. M. Anderson.....	Engineer Jute Mill.....	1,020 00
W. H. Meads.....	Overseer Jute Mill.....	1,020 00
Thomas Wilkinson	Farmer	1,020 00
W. H. Ludwig.....	Steward	1,020 00
E. H. Holmes.....	Record Clerk.....	960 00
C. F. H. Vollendorff.....	State Clerk.....	900 00
M. L. Haydon.....	Usher and Florist.....	900 00
J. C. Hall.....	Stockman	900 00
L. Doneen	Storekeeper	900 00
J. B. Kelly.....	Cage Guard Jute Mill.....	900 00
G. C. Abernethy.....	Cage Guard Jute Mill.....	900 00
J. J. Donohue.....	Gate Keeper.....	840 00
C. E. Kennedy.....	Gate Keeper.....	840 00
J. W. Taylor.....	Guard	840 00
G. C. Smith.....	Stenographer	840 00
J. H. Dixon.....	Day Turnkey.....	840 00
S. S. Stovall.....	Day Turnkey.....	840 00
L. Brown	Day Turnkey.....	840 00
A. D. Goolsby.....	Night Turnkey.....	840 00
R. G. Whisemant.....	Night Turnkey.....	840 00
P. A. Becker.....	Night Turnkey.....	840 00
C. H. Morrison.....	Night Turnkey.....	840 00
I. E. Severson.....	Night Turnkey.....	840 00
W. J. McGinnis.....	Night Turnkey.....	840 00
H. L. Walters.....	Guard	780 00
William Shepherd	Guard	780 00
W. L. Saunders.....	Guard	780 00
C. C. Chase.....	Guard	780 00
John Davison	Guard	780 00
C. D. Eglin.....	Guard	780 00
F. W. Hurley.....	Guard	780 00
W. H. Fehse.....	Guard	780 00
John Hodges	Guard	780 00
Martin Radcliffe	Guard	780 00
C. B. Allen.....	Guard	780 00
Anna Bouldron	Matron	780 00
Reinard Boewer	Watchman Jute Mill.....	780 00
C. A. Campbell.....	Guard Jute Mill.....	780 00
Oscar Berteloot	Guard Jute Mill.....	780 00
W. H. Holland.....	Guard Jute Mill.....	780 00
Herbert Brown	Guard Jute Mill.....	780 00
Paul Schultz	Guard Jute Mill.....	780 00
Roy M. Anderson.....	Engineer	660 00
Richard Mus	Warehouseman (Jute Mill).....	600 00
Richard Mus	Warehouseman (Penitentiary).....	360 00

STATE TRAINING SCHOOL.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
Thomas P. Horn.....	Superintendent	\$1,800 00
J. C. Nieuwenhuys.....	Accountant	1,200 00
H. B. Jennings.....	Engineer	1,200 00
E. E. Pearson.....	Assistant Superintendent.....	1,020 00
L. Marie Whipple.....	Baker Cook.....	900 00
G. B. King.....	Farmer	900 00

Name	Position	Salary Per Annum
J. E. Gates.....	Laundryman	900 00
W. J. Wingett.....	Tallor	900 00
T. A. Lewis.....	Shoemaker	900 00
G. A. McIlroy.....	Teacher	840 00
J. M. Sleichner.....	Physician	780 00
W. C. Green.....	Stockman	780 00
Edward Shields	Assistant Farmer.....	780 00
R. E. Holding.....	Lineman	720 00
Ada Merrick	Nurse	720 00
W. E. Chauncey.....	Woodcutter	720 00
W. R. Mumby.....	Lineman	600 00
R. D. Shutt.....	Lineman	600 00
Mrs. Thomas P. Horn.....	Matron	600 00
R. H. Charlton.....	Night Watchman.....	600 00
H. H. Detering.....	Night Watchman.....	600 00
C. T. Travis.....	Night Watchman.....	600 00
Elizabeth Burrows	Stenographer	600 00
Mrs. Weatherby	Teacher	600 00
Marie Whipple	Teacher	600 00
Mrs. Bernice Snyder.....	Housekeeper	480 00
Mrs. L. M. Ellsworth.....	Assistant Cook.....	480 00
J. E. Sutton.....	Minister	50 00
J. F. Day.....	Minister	50 00
T. R. Alleeson.....	Minister	50 00
T. Davis Acheson.....	Minister	50 00
F. A. Moens.....	Priest	50 00

STATE SCHOOL FOR GIRLS.

Name	Position	Salary Per Annum
Mary Campbell	Superintendent	\$1,800 00
Elizabeth Lowing	Clerk	1,200 00
G. F. Young.....	Engineer	1,200 00
Lloyd Buzzard	Farmer	900 00
Anita Worth	Farmer	900 00
Marvret Stocking	Teacher Domestic Science.....	780 00
May Meyer	Teacher	720 00
Mable McNamee	Teacher	720 00
Elizabeth Cavanaugh	Teacher	720 00
Mrs. Mary Ludington.....	Matron	720 00
Elizabeth Bomon	Matron	720 00
Marion Bunter	Matron	720 00
Mrs. Edith Wheatley.....	Nurse	720 00
Lois Gilbert	Assistant Farmer.....	600 00
Mrs. Elizabeth Rawson.....	Housekeeper	480 00
Lois Gilbert	Housekeeper	480 00
Mary J. Virtue.....	Housekeeper	480 00
Mrs. Jennie Goff.....	Assistant Matron.....	360 00
Mrs. Ethlyn Pittman.....	Assistant Matron.....	360 00

STATE REFORMATORY.

Name	Position	Salary Per Annum
Donald B. Olson.....	Superintendent	\$3,000 00
J. C. Wilcox.....	Assistant Superintendent.....	1,500 00
Geo. P. Dubuque.....	Accountant	1,200 00
F. D. Smith.....	Engineer	1,200 00
A. Balmer	Farmer	1,020 00
B. S. Elwanger.....	Night Captain.....	1,020 00
P. H. Raymond.....	Chaplain	960 00
A. L. Young.....	Steward	900 00

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
N. S. McCready.....	Physician	900 00
J. F. Byland.....	Storekeeper	900 00
George E. Heath.....	Tailor	900 00
J. L. Brady.....	Detail Officer.....	900 00
J. Evans	Record Clerk.....	840 00
John Mills	Assistant Engineer.....	840 00
W. V. Kennon.....	Gate Keeper.....	840 00
A. B. Hooper.....	Night Watchman.....	840 00
E. L. Sjogren.....	Overseer	840 00
J. L. James.....	Guard	780 00
Frank Donner	Guard	780 00
A. L. Garvin.....	Overseer	780 00
J. L. Mulhern.....	Guard	720 00
Archie Fumerton	Guard	720 00
Alfred Neilson	Guard	720 00
W. A. Kellogg.....	Night Watchman.....	720 00
J. F. Andrews.....	Overseer	720 00
J. A. Idtensohn.....	Overseer	720 00
George W. Jenks.....	Overseer	720 00
C. D. Horton.....	Truckman	720 00
Daniel Grace	Priest	240 00

CAPITOL BUILDING AND GROUNDS.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
A. J. Stocks.....	Engineer	\$1,800 00
Frank Imley	Assistant Engineer.....	1,080 00
M. F. Prine.....	Assistant Engineer.....	1,080 00
C. L. Rogers.....	Night Watchman.....	960 00
B. F. Dorsey.....	Gardener	960 00
R. J. Wilson.....	Janitor	960 00
Marie Jensen	Janitor	960 00
Ed Elliott	Janitor	960 00
Mrs. A. Nagel.....	Janitor	960 00
M. A. House.....	Janitor	960 00
Lee Kendrick	Elevator Operator.....	900 00

TEMPLE OF JUSTICE.

<i>Name</i>	<i>Position</i>	<i>Salary Per Annum</i>
L. A. Coons.....	Custodian	\$1,380 00
Sam C. Willey.....	Fireman	1,080 00
Fred Canaday.....	Fireman	960 00
E. J. George.....	Janitor	960 00

REPORTS OF STATE DENTIST.

Honorable State Board of Control:

Gentlemen: I herewith have the honor of reporting to you the results of my examinations and treatments of the State charges that have come under my care in the various State institutions covering the period from October 1, 1916, to October 20, 1917.

During the last 12 months of active employment there were 2,067 patients examined and 1,524 patients receiving dental service.

My reports show that 52 per cent. of the incoming patients had never received dental attention.

The total number of teeth filled were 2,405 amalgam fillings, 344 cement fillings and 59 root-canal fillings. There were 642 cleaning and scaling cases, and 1,572 teeth extracted.

The above service was rendered at a cost of \$1.26 per patient receiving service and cost the State in salary and material \$1,921.36, or a saving to the State as compared with ethical prices for the same work of \$4,313.39.

The Western State Hospital required three months and twenty-five days to complete the work, as a part of the service had been rendered here just before September 30, 1916, and appeared in the last biennial report.

Forty-seven per cent. of incoming patients had not received previous dental care.

The change in population has been rapid, therefore making the service more extensive. The condition of the teeth in general shows improvement since my last visit.

In this institution, as in all of the State institutions, every patient received dental examination and all teeth saved where possible, and all other work completed that the conditions would permit.

The following service was rendered:

Patients examined.....	662	Root canal fillings.....	18
Amalgam fillings.....	494	Scaling or cleaning.....	241
Cement fillings.....	74	Extractions	843

The above service at ethical prices \$1,545.00, cost to State in salary and material, \$53.23; patients receiving service, 83; average cost to State per patient receiving service, \$1.16.

State School for the Deaf required eleven days to complete service.

Sixty-eight per cent. of incoming children had not received dental attention, but at this time I find the condition of the teeth much better than on my last visit.

The following service was rendered:

Patients examined.....	127	Root canal fillings.....	1
Amalgam fillings.....	85	Cleaning	11
Cement fillings.....	18	Extractions	63

The above service at ethical prices \$163.75, cost to State in salary and material, \$55.23; patients receiving service, 83; average cost to State per patient receiving service, \$0.64.

State School for the Blind required eleven days to complete the service.

Sixty-eight per cent. of incoming children had not received previous care. The condition of the teeth at this time is much better than on my last visit.

The following service was rendered:

Patients examined.....	55	Root canal fillings.....	1
Amalgam fillings.....	42	Cleaning	10
Cement fillings.....	4	Extractions	10

The above service at ethical prices \$79.00, cost to State in salary and material, \$33.87; patients receiving service, 35; average cost per patient receiving service, \$00.97.

Washington State Penitentiary required two months and seventeen days to complete dental services.

Fifty-three per cent. of incoming inmates have not received previous dental care.

The following service was rendered:

Patients examined.....	692	Root canal fillings.....	6
Amalgam fillings.....	521	Scaling or cleaning.....	197
Cement fillings.....	37	Extractions	418

The above service at ethical prices \$1,664.50, cost to State in salary and material, \$380.88; patients receiving service, 452, at an average cost of \$00.84.

State Training School for Boys required one month and eleven days.

Seventy-five per cent. of incoming boys have not received any care of the teeth before coming here.

This school, as well as all the State schools, should be visited at least once a year by the State dentist, due to the more rapid decay of the teeth at this age.

The following service was rendered:

Patients examined.....	148	Root canal fillings.....	9
Amalgam fillings.....	359	Cleaning	26
Cement fillings.....	32	Extractions	71

The above at ethical prices \$724.00, cost to State in salary and material, \$213.58; patients receiving service, 128, at an average cost of \$1.66.

State Training School for Girls required one month and four days to complete the dental service, and 51 per cent. of girls arriving at the school have not received previous dental care.

The following service was rendered:

Patients examined.....	111	Root canal fillings.....	10
Amalgam fillings.....	251	Cleaning	34
Cement fillings.....	67	Extractions	37

The above service at ethical prices \$644.50, cost to State in salary and material, \$173.69; patients receiving service, 92, at an average cost of \$1.88.

State Reformatory required two months and fourteen days to complete service. While 48 per cent. of incoming inmates had not received previous dental care, the teeth here are much better than I found on my other visits.

The following service was rendered:

Patients examined.....	273	Root canal fillings.....	14
Amalgam fillings.....	653	Cleaning or scaling.....	123
Cement fillings.....	112	Extractions	130

The above service at ethical prices \$1,414.00, cost to State in salary and material, \$454.09; patients receiving service, 238, at an average cost of \$1.91.

The above report covers twelve months of service, but at this time I have spent forty-nine months of active service as State dentist and the time has been not only very fully occupied with my duties, but very instructive, interesting and pleasant in the institution life and work.

In closing, I wish to express my appreciation of the uniform courtesy and assistance tendered me by the various superintendents and also by your honorable board.

Respectfully submitted,

J. H. WEBSTER,

State Dentist.

In closing this report of the work as a whole rendered the State while I have had the honor of holding my position, I am sending this so you may use it in any way you see fit, if you should so desire.

Time of active service, forty-nine months.

Patients examined.....	10,948
Patients not receiving service.....	3,409
Patients receiving service.....	7,539
Amalgam fillings.....	10,557
Cement fillings.....	2,192
Root canal fillings.....	164
Cleaning or scaling.....	2,496
Extractions	8,704
Above services at a minimum ethical price....	\$25,065 00
Cost to state in salary and material.....	7,752 15

Saving to the state.....\$17,312 85

Patients receiving service, 7,539, at an average cost of \$1.03.

DR. J. H. WEBSTER.

Honorable State Board of Control,
Olympia, Washington.

Gentlemen: In compliance with the State law, I herewith respectfully submit the report of the dental service rendered the State at the various institutions which I have visited in the past eight months, February 1 to September 30, 1918, inclusive.

My report shows a total of 1,819 patients examined. Of that number 1,573 required and received dental service, consisting of 952 amalgam fillings, 453 cement fillings, 27 root canal fillings, 728 cleaning or scaling cases and 1,554 extractions.

This service cost the State in salary and material \$1,256.27, an average of 80 cents per patient, and a saving of \$3,297.73 over the prevailing ethical prices for the same work.

I received my appointment January 21, 1918, and assumed my duties February 1, arriving at the State Custodial School at Medical Lake on that date.

My work at this institution was especially interesting from a professional standpoint, although very pathetic to me, as it was my first experience in an institution of any kind.

It required three months to complete the following dental service:

Patients examined.....	754	Root canal fillings.....	23
Patients receiving service.....	678	Cleaning or scaling.....	240
Amalgam fillings.....	527	Extractions	461
Cement fillings.....	188		

Above service at ethical prices \$1,837.50, cost to the State in salary and material, \$474.00. Average cost per patient receiving service, 55 cents.

I spent thirteen days at the State School for the Deaf, and found upon examination that there were several cases requiring prolonged treatment, which, owing to the fact that it was so near the close of the school term, I was unable to give. These were instructed to go to their local dentist at their homes, as I was unwilling to extract teeth that could be saved.

Patients examined.....	114	Cement fillings.....	27
Patients receiving service.....	87	Cleaning or scaling.....	17
Amalgam fillings.....	87	Extractions	18

Above service at ethical prices \$192.50, cost to the State in salary and material, \$68.16. Average cost per patient, 78 cents.

I spent four days at the State School for the Blind, and met the same conditions here as at the State School for the Deaf; namely, the need for prolonged treatments in order to avoid extraction.

Patients examined.....	51	Cement fillings.....	20
Patients receiving service.....	36	Cleaning or scaling.....	16
Amalgam fillings.....	32	Extractions	6

Above service at ethical prices \$95.50, cost to the State in salary and material, \$21.60. Average cost per patient, 60 cents.

It required two months and twenty-six days to complete the work at the Northern State Hospital.

Patients examined.....	780	Cement fillings.....	170
Patients receiving service.....	664	Cleaning or scaling.....	420
Amalgam fillings.....	176	Extractions	1,062
Root canal fillings.....	2		

Above service at ethical prices \$2,119.00, cost to the State in salary and material, \$511.83. Average cost per patient, 77 cents.

I have spent a month and five days at the State School for Girls. My work here is not quite completed at this time, but up to date, October 1st, have rendered service as follows:

Patients examined.....	120	Root canal fillings.....	2
Patients receiving service.....	108	Cleaning or scaling.....	35
Amalgam fillings.....	130	Extractions	7
Cement fillings.....	48		

Above services at ethical prices \$309.50, cost to the State in salary and material, \$180.68. Average cost per patient, \$1.65.

I desire, in conclusion, to express my appreciation of the courtesy shown me by your honorable board, and also the kindness and co-operation extended me at each of the above institutions.

Respectfully submitted,

H. C. KRIEGER,

State Dentist.

REPORTS OF SUPERINTENDENTS

WESTERN STATE HOSPITAL.

To the Honorable State Board of Control, Olympia, Wash.

Gentlemen: We have the honor to submit herewith the Ninth Biennial Report of the Western State Hospital, Fort Steilacoom, Wash., for the past biennial period, beginning October 1, 1916, and ending September 30, 1918.

Population Statistics—The patient population at this hospital on October 1, 1916, totaled 1,463, of whom 110 were out on parole and 27 absent by reason of escape, leaving a total of 1,326 (770 males and 556 females).

During the first year of the biennium there were admitted 346 patients (238 male and 108 female); 235 vacancies were created through 102 discharges (63 male and 39 female); 131 deaths (97 male and 34 female); one female transferred to the Eastern State Hospital, Medical Lake, Wash., and one male deported, leaving a total population on October 1, 1917, of 1,574, which included 111 patients out on parole and 50 out on escape, making the actual population 1,414 at the hospital October 1, 1917 (830 male and 584 female).

The patient population at this hospital on October 1, 1917, totaled 1,575, of whom 111 were out on parole and 50 absent by reason of escape, leaving a total of 1,414 (830 male and 584 female).

During the second year of the biennium there were admitted 498 patients (339 male and 159 female); 508 vacancies were created through 367 discharges (275 male and 91 female); 141 deaths (92 male and 49 female); one female patient being transferred to the Custodial School, Medical Lake, Wash., leaving a total population on October 1, 1918, of 1,565, which included 104 patients out on parole and 42 out on escape, making a total of 1,419 patients at the hospital (800 male and 619 female).

Since 1871 we have had until October 31, 1918, 11,313 admissions into the hospital and there has been discharged since 1871, 6,764 to date. We have at present 104 patients on parole, making a total of 6,509, allowing for transfers to other hospitals and deportations. These figures show that of the total number of cases admitted to the hospital over one-half of them are returned again to society. The average duration of life among our chronic patients in this hospital still remains about four years. Patients who again return to society remain in the hospital on an average of about eighteen months.

Alien and Non-resident Insane—Deportation of the alien insane to their native foreign countries has virtually ceased at the present time. Marked restrictions occurred at the onset of the war because travel on the high seas became too hazardous, and since our entrance no deportations have been made overseas.

The federal immigration authorities are keeping track of cases eligible for deportation and have issued warrants for ten cases at present in the hos-



DAIRY HERD, WESTERN STATE HOSPITAL.

pital. These are held until conditions are safe for deportation. They now have under investigation about twenty cases.

A few deportations have been made to Canada.

Considerable headway has been made in returning to their resident states non-resident patients who have been committed to this hospital. This work requires a great deal of investigation and with our present stenographic and office force is pursued under great difficulties.

Considerable pioneering was done and, benefiting by our experience, we are having less difficulty in making these returns in a proper and satisfactory manner.

We have returned to their resident states at the expense of the State of Washington, using the fund appropriated for this purpose by the last session of the Legislature, seventy-one male and two female patients, a total of seventy-three patients.

We have at present in the hospital about fifteen cases in addition to those above mentioned that are awaiting return to their resident states. Owing to a shortage of attendants we have been unable to make these returns earlier.

In this connection it is proper for us to report that we are convinced that some states have at different times expelled from their borders into our boundaries a certain class of insane who finally drift into our institution, and having no laws protecting us against such practices, we have suffered to a considerable extent.

It would be well for us to provide against this by the enactment of some law similar to that of New York State, in which it becomes a very serious offense for a person to bring into the State, knowingly, non-resident insane without proper authority.

The establishment of the United States army cantonment at American Lake means a great deal to Fort Steilacoom.

The nearest boundary of this cantonment is about a mile from the hospital grounds, Camp Lewis is about seven and one-half miles. The cantonment embraces 120 square miles and the United States government has expressed itself definitely that this is to be a permanent cantonment in times of peace, as well as during war.

During the past biennium we have received from the remount station about 3,500 tons of manure for our grounds. Between 7,000 and 9,000 head of horses and mules are taken care of at the remount station. We can arrange with the United States authorities to obtain almost any amount of manure we desire if we can arrange for its transportation here. The manure we have received cost us nothing except the labor involved in transporting same.

The base hospital at the present time is doing all our laboratory work, which means, among other things, the microscopic and chemical examination of the blood and spinal fluid of almost every patient who is committed.

In 1917 medical officers from the base hospital helped to abort a threatened epidemic of typhoid fever, and all patients and employees of the hospital received the three vaccinations which are used, composite serum being used against typhoid and the two strains of para-typhoid. Over 4,500 injections were administered by the base hospital medical officers.

In return for this we received and took temporary care of a number of soldiers afflicted with mental diseases. At the present time we are still taking care of suitable cases transferred to us from the base hospital, the basis of compensation being 90 cents a day.

These arrangements were entered into with Colonel E. J. Northington, first commandant at the base hospital, and have been continued and approved by the present commandant, Colonel Dudley Fulton.

In the spring of 1918 Captain Jackson of the remount station was unable to obtain help in cleaning and overhauling the remount station and appealed to us for assistance as a military necessity. Some of our working crews were sent over under our own attendants and worked with and among the soldiers in this work. For this work Captain Jackson awarded to the hospital, the amount which he would have been obliged to pay in the open market for this work, this sum amounting to \$4,822.50, out of which we paid transportation charges amounting to \$515.80, leaving a balance of \$4,306.70, which was remitted to the State Treasurer.

The amount of garbage suitable for hog feed at the camp varies from fifteen to thirty tons daily. At the present the government disposes of this by private contract to individuals engaged in hog raising. Contracts are let yearly.

If properly handled suitable arrangements might be made with the federal government by the State of Washington whereby the Western State Hospital could obtain this garbage for hog feed. If such an arrangement was entered into we could raise enough pork and bacon to supply the twelve institutions in the State of Washington and probably have a surplus on hand to dispose of. We could render tallow from a certain portion of the garbage, and the bones and meat scraps could be ground up and be of value in the poultry department.

Around Waughop Lake, on our grounds, is a very suitable location for the establishment of large sanitary pig pens. This project is not at all visionary, but represents an opportunity for us to engage in a profitable industry.

It is sometimes necessary to enter into prolonged negotiations to complete such plans with the United States government, but I am assured that there is no reason why we should not be successful, and if so, we would require a sufficient amount of money to be appropriated to install our new stock yards and to provide transportation for the garbage.

This garbage is all A1. It is carefully separated at the camp and is far superior to the best purchased hog feed, none of which we can obtain now for less than \$30.00 a ton.

We have investigated the garbage feeding of hogs, as now carried on in some eastern cities, and when properly managed is not difficult, very little hazard and very profitable.

A sanitary zone five miles deep has been established by the federal government around the cantonment. This zone is under the jurisdiction of the United States Public Health Service. The hospital grounds lie in this zone and we have had the benefit of the inspection and attention from the United States public health officers. Several requests for appropriations in our present budget are made in response to suggestions from these officers.

Review of Movement of Employees—Two of our attending physicians have resigned to enter the government service.

Dr. A. C. Stewart was commissioned captain and appointed in charge of the neuro psychiatric wards at the base hospital, Camp Lewis, Wash., where he remained nine months, lately being attached to Base Hospital Unit No. 95, which was sent to Siberia.

Dr. F. T. Wilt was commissioned captain and placed in charge of the psychiatric department of the Seattle Red Cross base hospital and is now somewhere in France.

Mr. C. E. Sutherland resigned as accountant to work for contractors engaged in spruce production for the United States. He was succeeded by Mr. O. D. Foley.

Dr. J. B. Loughary was appointed on the staff on March 1, 1918.

Dr. N. H. Young served on the medical staff for a period of seven months.

The superintendent, Dr. W. N. Keller, was granted a leave of absence on September 20, 1918, to enter the army medical service, being commissioned major. Dr. J. B. Loughary was appointed acting superintendent during his absence.

Our storekeeper, Mr. G. W. Thompson, resigned and was succeeded on September 19, 1917, by William Petrie.

Supervisor R. T. Russell resigned on August 22, 1918, and opened up a private sanatorium. He was succeeded by Mr. E. E. Macklin.

War Activities—Our service flag shows twenty-four stars for those who have left active service in the hospital and immediately entered army service. A great many more than this have really left the hospital and entered the army service, but only those are numbered who went directly from hospital employment into the army.

Every loan has been liberally subscribed to. During the first Liberty loan about \$5,500.00; the second Liberty loan, \$8,000.00; the third Liberty loan about \$9,800.00; the fourth Liberty loan, \$7,600.00. The War Savings Stamp subscription amounted to about \$9,800.00.

Considerable Red Cross work has been done by our patients. Altogether about 150 sweaters, 36 helmets, 100 pairs of socks, 50 pairs of wristlets and 150 scarfs have been knitted out of yarn furnished by the Red Cross.

We are also making rugs in our rug department out of rags which are furnished by the Red Cross. These are dyed, woven into rugs and returned to the Red Cross, who place them on sale, they receiving the proceeds. To date we have made 75 rugs.

Every Red Cross drive was liberally subscribed to, but the exact amounts are not known.

At the last registration, September 12, 1918, thirty-three registered from this hospital.

There has been considerable unrest among hospital employees, as among other classes. Wages have been increased in a great many institutions and there has been a constant change of employees who are searching for those institutions which pay the highest wages.

Women at the present time are filling the places of men in many departments. It has been especially difficult to keep cooks, bakers and mechanics, as wages paid on the outside are so high.

Honor Roll—The following employees have left our employ and gone directly into army service:

A. C. Stewart, M. D.	O. D. Puckett	R. F. Bolden
F. T. Wilt, M. D.	L. R. Moore	L. J. Cotton
Wm. N. Keller, M. D.	J. T. Petrich	R. E. Cole
J. J. Loyd	H. R. McMullin	George Owens
Carl Christianson	Karl Cobb	Charles Keeton
Jess Stranahan	C. A. Parks	S. Bjornson
F. J. McCann	Juel Rinker	Mrs. Emma Davis
H. Larson		

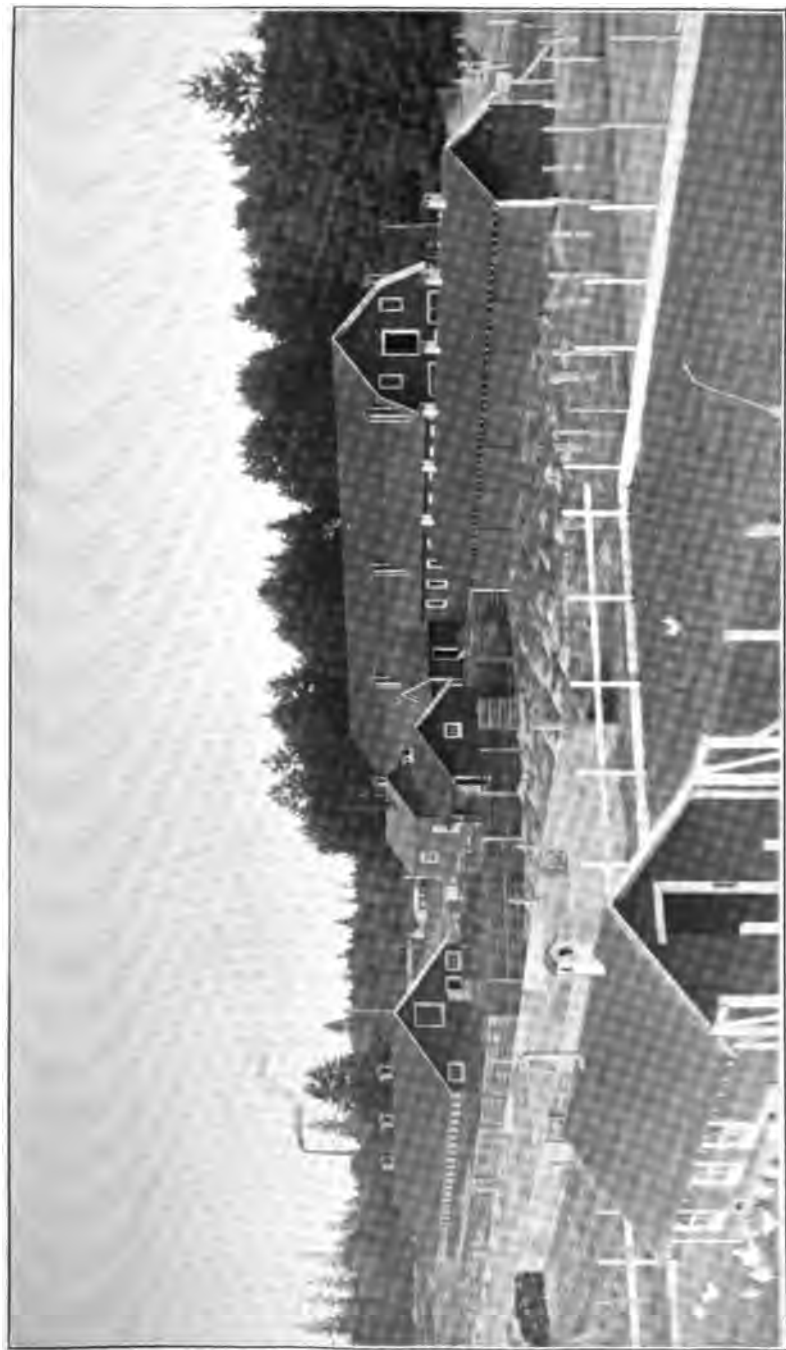
REVIEW OF IMPROVEMENTS AND ALTERATIONS.

A. Buildings, Etc.—

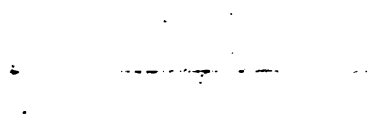
1. Completion of creamery, made of tile.
2. Enlargement of annex, doubling the capacity of the present building.
3. Completely overhauling and remodeling wards 4, 5 and 6. Placing in new floors, removing wainscoting and using beaver board for walls.
4. Making over clothes rooms in wards 10, 11, 12, 4, 5 and 6.
5. Rebuilding water closets, which includes the toilets, baths, clothes rooms and a number of private rooms in wards 10, 11 and 12.
6. New galvanized iron roof with tin decks placed over wards 4, 5 and 6.
7. Old buildings in the baseball park torn down.
8. Several rooms built in what is known as the tubercular cottage, to be used for attendants' bed rooms.
9. New irrigating system installed on farm.
10. New root house completed, two stories high, made of tile construction.
11. Extension to calf barn to accommodate twenty calves.
12. Completion of hospital building on farm to care for sick animals, two stalls.
13. Erection of reinforced concrete silo for dairy barn, capacity 180 tons.
14. Painting of all hospital buildings cream color, brown trimmings, two coats. This work is about 40 per cent. completed at the present time.

B. Grounds, Roadways, Lawns, Etc.

1. About two acres in nursery.
2. Gulch clearing has continued and almost completed.
3. Many new paths have been constructed.
4. Twenty-nine waterfalls have been made in Murray creek.
5. In one large dump over 60,000 cubic feet of clay has been used behind a cedar cribbing, establishing an attractive pond.
6. The main highway through the grounds has been paved. This paving was continued through and beyond the hospital grounds as far as the city limits of the village of Stellacoom. This road is of concrete, 16 feet wide and 19 feet on the curves, six inches thick on the edges and seven inches in the center, is over two miles long. Through the hospital ground this road was reinforced with concrete wire mesh 4x6 inches.
7. The stone fence has been completed on one side of the main highway as far as our eastern boundary.



FARM BUILDINGS, WESTERN STATE HOSPITAL.



LEGISLATION SUGGESTED.

We repeat requests previously made for legislation which will permit persons to voluntarily place themselves in the care of the hospital when they may be suffering from mental and nervous diseases or threatening mental disorders.

Legislation should also be provided for licensing of private institutions for the care of the insane, providing for their inspection and proper supervision and making specific provision for the commitment of patients thereto.

Legislation providing for the appointment of public administrator, guardian or officer to look after the legal affairs of those patients who have not friends or relatives who will interest themselves in their behalf.

We believe it is a good idea to provide or establish a fund known as "Institution Betterment Fund" similar to that used at the State Hospital for the Insane at Salem, Oregon. Cash received from various sources, such as junk, farm products, grain bags, hides, etc., is placed in this fund, which is expended under the direction of the Board of Control for institution betterment purposes. During the past biennium we have returned to the State of Washington about \$10,000.00.

We believe it is an excellent idea to have our hospital regularly inspected by some competent persons not connected with hospitals, or with the Board of Control. All complaints relative to patients and hospital management should be referred to them for an impartial investigation. Such a method has been followed in other states with excellent results.

A law is advised establishing a penalty on any one bringing into the State, knowingly, any insane, non-resident person without proper authority. It is recommended that a law be enacted requiring the number of attendants in this hospital to be kept on a definite, minimum ratio with patients, and at no time should there be less than one attendant at least for twelve patients. It should also be made compulsory that an attendant should be on duty on every ward constantly during the night.

FARM.

The following list of the important improvements made and results secured at the farm during the past two years:

Horse barn finished—40x110 feet—built of tile, with shingle roof.

Built extra dairy barn, 36x60 feet, containing five maternity box stalls, 12x12 feet; feedway the length of the building and 12 feet wide; stanchions for 12 cows and feed room, 8x12 feet, built of old lumber except the shingles. This barn was built for tubercular pure bred herd of twelve cows from Donnybrook farm, Bothell, Wash.

Extension on calf house, 16x40 feet, containing eight calf stalls.

Built seven A-shape hog houses, 8x10 feet, one-half old lumber.

Built concrete silo, 16x40 feet; capacity, 180 tons silage. This silo has proved a great success in every way.

Extension on two brooder houses, 16x14 feet.

Remodeled brooder house, 16x72 feet, to accommodate rabbits.

New electric irrigating pump installed, ready for use, with a large amount of 16-inch wood pipe.

Twenty-five acres of crops have been irrigated this year, 1918, with this new system; fourteen acres with old system, making thirty-nine acres in all.

A fill, 20x70 feet, extending out into the lake for pump station, was put in, containing 480 yards of dirt, excavated from hillside north of slaughter house.

New creamery building has been finished and equipped with milk separator, 100-gallon churn, 100-gallon pasteurizer, 40-gallon starter can, milk tester, concrete cooling room and vats, with other necessary equipment.

Twenty-three acres of land cleared of wood and stump ready for plow, and off which 500 cords of wood have been cut.

The site for the new sleeping shed for dairy herd is being filled in, and up to date about 900 yards of gravel and dirt have been hauled in.

Two thousand tons of horse manure from Camp Lewis have been spread over our farm. Of this, 800 tons were hauled direct from Camp Lewis by truck, the balance of 1,200 tons came by rail—50 tons per car.

Sixty truck loads of spruce shavings have been hauled for bedding for stock, making a saving of 90 tons of straw.

Twenty-two and one-half acres of nearly cleared upland have been seeded to pasture grass, part of which will be planted in potatoes in the spring of 1919.

Thirteen acres of newly cleared land were seeded to field corn this spring, and the crop is showing up very good and yielding eight tons of silage corn per acre. Ten acres of raw prairie land were broken up and seeded to spring oats, but made a poor showing, as most of the early planted oats has done in Western Washington this year.

FARM CROP FOR 1918.

This year we have put 96 acres in crop and 9 acres in pasture grass; 84½ acres of this is at the farm, 20½ acres at Reed ranch.

The crop planted consists of the following:

Thirty-eight acres of field corn has done very well and will average eight to ten tons of green corn per acre. We should have about 300 tons in all, part of this being in the silo at this time.

One acre of carrots, which will yield twenty tons.

Seven acres of stock kale, doing nicely.

Nine acres of mangels, which are not as good as last year, but expect 140 tons.

Seven acres of oats, very poor.

Twelve acres of oats and peas, fair crop.

Eight acres of winter wheat and vetch, very good for upland soil. Cut fifty tons and put in silo.

Ten and one-half acres of potatoes, expect a good crop on land near lake. Those on upland will be much better than last year's crop.

One acre of tobacco is doing well.

Three acres of hull-less barley, fair crop.

Nine acres of pasture grass, doing very well considering the dry season.

All the seed corn this year was raised on the farm. We expect to have our own mangel seed for next year, also part of our seed potatoes.

DAIRY HERD.

Our herd of cattle consists of 114 head—27 pure bred cows, 5 pure bred heifers, 12 pure bred bulls from two months to one year old, 38 grade Holstein cows, 31 grade heifers and calves, 1 herd bull.

Owing to the high price and scarcity of feed, we have cut down our herd from 142 head.

The Donnybrook herd of twelve cows has been paid for and have five pure bred heifers as a foundation for our future herd of pure breds.

We expect to have the Greenbank herd paid for by the spring of 1919.

Have sold ten pure bred young bulls for \$990.00.

Have on hand twelve bulls worth \$1,200.00. (Young).

Sold twenty-four grade cows and calves for \$1,380.00.

Started making butter last week in February and have made up to September 1, 7,768 pounds. Fifty head of cows produced 493,305 pounds of milk, or an average of over 9,672 pounds each. Part of these cows have been milking but from five to eight months by the end of the year. Only seven of the cows that have been milking from one to three months and then butchered, were withdrawn from this record.

Although we are starting our pure bred Holstein herd with some of the best bred stock in the Northwest, we should not be satisfied with what we have, but keep trying to improve the standard and production of our herd, and the only way to do this is to keep getting a better bred sire each time you need outside blood. The bull is 60 per cent. of the herd, so, therefore, he should always be superior in breeding and individuality to the cows of the herd.

SWINE DEPARTMENT.

The number of hogs has been cut down the same as the dairy herd, on account of scarcity and high price of feed. On October 1, 1916, we had 669 head of hogs and on October 1, 1918, there will be less than 400 head.

This department has been much more profitable the last twelve months than at any time before, owing to the advance in price of fresh pork, ham and bacon. We have furnished our institution with ham and bacon for the last two years, besides shipping several hundred pounds of each to other State institutions.

It may be advisable later to increase the size of our herd again to 550 head; the thing most needed in this department is new and better bred boars.

The herd boar, as the herd bull, is 60 per cent. of the herd, and one way to save high priced feed is to raise uniform, growthy, big-boned hogs, and without good herd boars it cannot be done.

POULTRY DEPARTMENT.

The poultry department has been by far the most profitable department on the farm, but like the dairy and swine departments, was cut down in 1917.

On October 1, 1916, we had 4,800 hens and pullets and on October 1, 1917, we had 3,000 hens and pullets, a reduction of over one-third of the flock, but on account of the increase in the price of beef, mutton and pork, we decided this last spring to increase our flock again, and on October 1,

1918, we will have a flock of 5,000 hens and pullets, which will greatly increase our egg production for the year 1919.

In 1917, there were 6,100 dozen eggs put down in water glass solution, and in 1918 over 5,000 dozen have been packed for winter use. Besides furnishing our own institution with eggs we have sold 17,680 dozen, mostly to other State institutions, at a value of \$8,823.60, since October 1, 1917.

WESTERN STATE HOSPITAL.

Profit and Loss Statement of the Farm, Garden and Livestock Departments for Biennium Ending September 30, 1918.

Inventory of all livestock October 1, 1916.....	\$21,018 80	
Operating expenses, including cost of supplies, feed, implements and livestock purchased—		
Poultry department.....	17,248 26	
Swine department.....	20,304 86	
Dairy department.....	33,127 56	
Horse barn.....	3,810 34	
Farm, ranch and vegetable garden departments.....	6,328 30	
Salaries all departments.....	8,828 28	
Fifty per cent. of stable and garage expense.....	5,559 10	
Depreciation on farm buildings, machinery, implements, etc., at 5 per cent. per annum (inventory value, \$29,321 34).....	2,932 12	
Interest on investment at 3 per cent. per annum on land, buildings, implements and stock (investment, \$79,539 85).....	4,772 38	
Value of all produce raised (consumed or sold)—		
Poultry department.....		\$39,575 21
Swine department.....		36,940 88
Dairy department.....		48,881 88
Horse barn department.....		512 00
Farm, ranch and garden departments.....		43,815 58
Inventory of all livestock September 30, 1918.....		23,304 00
Net profit.....	69,099 75	
Totals.....	\$193,029 75	\$193,029 75

(Note—The amount shown here as the total farm products does not correspond with the amount credited to this institution in the report of the State Board of Control. The reason is that while the above figures are correct in the system of accounting to show the net profits of the farm they contain items that have to be eliminated to ascertain the actual value of products raised.)

MISCELLANEOUS FUND DURING THE BIENNIUM ENDING
SEPTEMBER 30, 1918.

	Dr.	Cr.
Cash received for dental work.....	\$115 35	
Cash received for fine for escaped patient.....	5 00	
Cash received for miscellaneous drug sales.....	4 55	
Cash received account refund from Superintendent Public Documents.....	10	
Cash received for freight claim settlement, N. P. Ry.....	5 30	
Cash received for shoe repairing.....	6 10	
Cash received for sale of shoes.....	5 00	
Cash received for sale of hides.....	914 78	
Cash received for sale of hogs.....	269 45	
Cash received for sale of junk (paper, iron, rags).....	427 56	
Cash received for sale of Holstein cattle.....	2,668 66	
Cash received for sale of eggs.....	5,507 10	
Cash received for sale of Garden produce.....	115 68	
Cash received for care of patient.....	17 00	
Cash received for sale of electric irons.....	130 88	
Cash received for ammonia cylinder returned.....	20 00	
Cash received for fir barrels.....	40 00	
Cash received for sale of lumber.....	27 06	
Cash received for refund part of attendants' salary.....	11 67	
Cash received for redemption on railway transportation.....	11 78	
Cash received for deportation of insane.....	35 00	
November, 1916, remitted to State Treasurer.....		\$0 25
December, 1916, remitted to State Treasurer.....		5 70
January, 1917, remitted to State Treasurer.....		16 40
February, 1917, remitted to State Treasurer.....		196 18
March, 1917, remitted to State Treasurer.....		60
April, 1917, remitted to State Treasurer.....		90 03
May, 1917, remitted to State Treasurer.....		87 29
June, 1917, remitted to State Treasurer.....		17 69
July, 1917, remitted to State Treasurer.....		496 61
August, 1917, remitted to State Treasurer.....		2 97
September, 1917, remitted to State Treasurer.....		85 87
October, 1917, remitted to State Treasurer.....		563 53
November, 1917, remitted to State Treasurer.....		874 67
December, 1917, remitted to State Treasurer.....		962 86
January, 1918, remitted to State Treasurer.....		408 88
February, 1918, remitted to State Treasurer.....		86 50
March, 1918, remitted to State Treasurer.....		484 20
April, 1918, remitted to State Treasurer.....		1,279 00
May, 1918, remitted to State Treasurer.....		1,913 36
June, 1918, remitted to State Treasurer.....		405 97
July, 1918, remitted to State Treasurer.....		371 41
August, 1918, remitted to State Treasurer.....		458 54
September, 1918, remitted to State Treasurer.....		371 93
Totals.....		\$9,180 44
January, 1917, paid Dr. J. H. Webster for dental services.....		112 38
September 30, 1918, cash in fund.....		1,043 18
Totals.....	\$10,336 00	\$10,336 00

PATIENTS' FUND.

Covering Period from October 1, 1916, to September 30, 1918.

Balance on hand October 1, 1916.....	\$6,182 80	
Receipts.....	10,679 82	
Disbursements.....		\$8,859 15
Balance on hand September 30, 1918.....		8,003 47
Totals.....	\$16,862 62	\$16,862 62

DECEASED AND ESCAPED PATIENTS' FUND.

Covering Period from October 1, 1916, to September 30, 1918.

Balance on hand October 1, 1916.....	\$3,224 63	
Receipts.....	1,586 10	
Disbursements.....		\$524 96
Balance on hand September 30, 1918.....		4,284 77
Totals.....	\$4,809 73	\$4,809 73

UNCLAIMED PATIENTS' FUND.

Covering Period from October 1, 1916, to September 30, 1918.

Balance on hand October 1, 1916.....	\$662 73	
Receipts.....	43 39	
Disbursements.....		\$0 71
Balance on hand September 30, 1918.....		705 41
Totals.....	\$706 12	\$706 12

AMUSEMENT FUND.

Covering Period from October 1, 1916, to September 30, 1918.

Balance on hand October 1, 1916.....	\$49 26	
Receipts.....	1,783 00	
Disbursements.....		\$706 86
Balance on hand September 30, 1918.....		1,125 40
Totals.....	\$1,832 26	\$1,832 26

Table No. 1—Continued.
SHOWING MOVEMENT OF POPULATION BY MONTHS FOR THE YEAR OCTOBER 1, 1917, TO SEPTEMBER 30, 1918.

MONTHS	ADMITTED				DISCHARGED										Died		Daily Average						
	For First Time		Re-admitted		Trans. from Other Institutions		By Order of Court		Re-covered		Im-proved		Unim-proved		Trans. to Northern Hospital			Trans. to Eastern Hospital		Deported by Federal Govern-ment			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		M.	F.	M.	F.		
October, 1917.....	39	5							9		7										10	6	1,418.7
November, 1917.....	13	10					1		1		12		1								7	4	1,896.9
December, 1917.....	18	16							2		7		1		1						8	4	1,897.5
January, 1918.....	21	13							1		17		1								9	2	1,392.35
February, 1918.....	19	10									1		2								9	6	1,402.39
March, 1918.....	30	14									9		1		3						9	5	1,408.5
April, 1918.....	34	23									14		5		2						1	9	1,416.13
May, 1918.....	21	24									20		1								12	2	1,413.74
June, 1918.....	45	13							2		8				1						8	2	1,419.8
July, 1918.....	27	11							2		24		2								8	5	1,422.2
August, 1918.....	46	8						1	4		8		11		5		2				4	4	1,427.4
September, 1918.....	26	12							16		17		94		14		1				7	3	1,431.6
Totals.....	339	159	5	4	1		1	1	37	44	224	42	14	6	2			1			95	45	1,411.85

Table No. 2.
SHOWING AGE ON ADMISSION OF PATIENTS ADMITTED.

AGES	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Under 15 years.....				1		1
15 and under 20.....	7	4	11	8	7	15
20 and under 25.....	25	11	36	18	11	29
25 and under 30.....	27	9	36	29	14	43
30 and under 35.....	30	17	47	44	20	64
35 and under 40.....	39	12	51	27	25	52
40 and under 45.....	27	9	36	23	18	41
45 and under 50.....	16	8	24	23	18	41
50 and under 55.....	13	11	24	17	9	26
55 and under 60.....	10	8	18	10	7	17
60 and under 65.....	7	5	12	18	7	25
65 and under 70.....	9	6	15	8	3	11
70 and under 75.....	11	2	13	3	6	9
75 and under 80.....	6	3	9	4	5	9
80 and under 85.....	6	2	8	4		4
85 and under 90.....	1	1	2			
90 and under 95.....	2		2		1	1
Age unknown.....	2	1	3	15	8	23
Soldiers (unknown).....				87		
Totals.....	238	109	347	339	159	411

Table No. 3.
SHOWING COUNTY RESIDENCE OF PATIENTS ADMITTED DURING THE
BIENNIUM ENDING SEPTEMBER 30, 1918.

COUNTIES	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Chelan.....				3	2	5
Clallam.....						
Clarke.....	8	2	10	17	11	28
Cowlitz.....	2		2	4	1	5
Grant.....						
Grays Harbor.....	19	4	23	20	7	27
Island.....						
Jefferson.....						
King.....	75	36	111	51	56	107
Kitsap.....	1		1			
Kittitas.....	5	2	7	6	8	14
Lewis.....	13	3	16	13	8	21
Mason.....	1	1	2	2	1	3
Pacific.....	3	5	8	6	1	7
Pierce.....	76	39	115	93	49	142
San Juan.....						
Skagit.....						
Skamania.....						
Snohomish.....						
Thurston.....	6	3	9	8	7	15
Wahkiakum.....	5		5			
Whatcom.....						
Yakima.....	16	14	30	11	8	19
Camp Lewis (Soldiers).....	8		8	105		105
Totals.....	238	109	347	339	159	498

Table No. 4.

**SHOWING CIVIL CONDITION OF PATIENTS ADMITTED DURING THE TWO
YEARS ENDING SEPTEMBER 30, 1918.**

CIVIL CONDITION	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Married	73	72	145	73	110	183
Single	143	21	164	129	32	161
Widowed	15	10	25	12	12	24
Divorced	2	6	8	2	.....	2
Unknown	5	.....	5	123	5	128
Totals	238	109	347	339	159	498

Table No. 5.

SHOWING NATIVITY OF PATIENTS ADMITTED.

NATIVITY	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Native born.....	135	74	209	135	106	241
Foreign born.....	102	35	137	104	47	151
Austria	14	.....	14	10	5	15
Bohemia .....	.....	.....	.....	1	1	2
Bulgaria .....	.....	.....	.....	1	.....	1
Belgium	2	.....	2	1	.....	1
Canada	10	6	16	12	4	16
Denmark	4	1	5	1	2	3
England	8	2	10	7	4	11
Finland	5	2	7	5	5	10
France .....	.....	1	1	.....	.....	.....
Germany	5	3	8	8	1	9
Greece	3	.....	3	4	.....	4
Holland	2	.....	2	1	1	2
Hungary .....	.....	.....	.....	2	.....	2
India .....	.....	.....	.....	1	.....	1
Ireland	7	4	11	.....	1	1
Italy	2	1	3	11	3	14
Japan	1	.....	1	.....	.....	.....
Norway	9	5	14	11	6	17
Nova Scotia.....	1	.....	1	2	.....	2
Poland	1	.....	1	3	3	6
Russia	7	2	9	9	.....	9
Switzerland	1	.....	1	2	1	3
Scotland	1	2	3	2	.....	2
Sweden	16	4	20	9	9	18
Syria .....	.....	.....	.....	.....	1	1
Turkey	1	.....	1	1	.....	1
Ukrania .....	.....	.....	.....	1	.....	1
Wales	2	2	4	.....	.....	.....
Unknown (including soldiers).....	1	.....	1	100	6	106
Totals	238	109	347	339	159	498

Table No. 6.

SHOWING OCCUPATION PRIOR TO ADMISSION OF PATIENTS ADMITTED.

OCCUPATIONS	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
I. AGRICULTURAL AND RURAL.....	24		24	30		30
Farmer	22		22	24		24
Rancher	2		2	5		5
Gardener.....				1		1
II. COMMERCIAL AND MEROANTILE.....	18	1	19	12	2	14
Agent, insurance.....				1		1
Agent, rental.....				1		1
Agent, real estate.....	1		1			
Bartender	1		1			
Butcher	2		2	2		2
Hotel proprietor.....				1	1	2
Jeweler	1		1			
Merchant	5		5	2		3
Saleslady		1	1			
Salesman	8		8	3		3
Sales manager.....				2		2
III. MANUFACTURING AND MECHANICAL.....	61		61	56	1	57
1. Building Trades.....	17		17	21		21
Bricklayer	1		1			
Boat builder.....				1		1
Carpenter	7		7	9		9
Contractor	2		2			
Cooper	1		1	2		2
Electrician	1		1	1		1
Painter	2		2	4		4
Plumber	2		2			
Ship builder.....	1		1	4		4
2. Mining	11		11	6		6
Miner	10		10	6		6
Mining engineer.....	1		1			
3. Food Products.....	2		2	5		5
Baker	1		1	2		2
Cook	1		1	3		3
4. Iron and Steel Workers	8		8	5		5
Boilermaker	1		1			
Blacksmith	2		2			
Machinist	5		5	4		4
Moulder				1		1
5. Lumber and Its Remanufacture.....	15		15	14		14
Donkey engineer.....	2		2			
Logger	11		11	11		11
Shingle weaver.....	1		1	1		1
Tallyman	1		1	1		1
Wagonmaker				1		1
6. Paper and Printing.....	1		1	1		1
Printer	1		1	1		1
7. Textiles	1		1	1		1
Tailor	1		1	1		1
8. Miscellaneous	6		6	3	1	4
Engineer, electrical.....	1		1			
Engineer, civil.....	1		1			
Engineer, stationary.....				1		1
Iron worker				1		1
Lumberman	1		1			
Glass worker.....	1		1			
Powder maker.....	1		1			
Lace maker.....				1		1
Watch maker.....	1		1			

Table No. 6—Continued.

SHOWING OCCUPATION PRIOR TO ADMISSION OF PATIENTS ADMITTED.

OCCUPATIONS	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
IV. COMMUNICATION AND TRANSPORTATION	12		12	11	1	12
1. Telegraph and telephone	2		2		1	1
2. Steam roads	4		4	6		6
Agent, railroad	2		2			
Car inspector	1		1			
Conductor, railroad	1		1			
Engineer				3		3
Porter				1		1
Railroader				2		2
3. Other occupations	6		6	5		5
Chauffeur				1		1
Car conductor				1		1
Delivery boy	1		1	1		1
Messenger boy				1		1
Marine fireman	2		2			
Teamster	2		2	1		1
Transfer man	1		1			
V. PROFESSIONAL	8	6	14	6	13	19
Detective				2		2
Evangelist					1	1
Masseurist		1	1			
Milliner					1	1
Musician	1		1			
Minister				1		1
Nurse	2	1	3		5	5
Newspaperman	1		1			
Physician					1	1
Pharmacist	1		1			
Photographer	1		1			
Student	2	4	6	2	1	3
Teacher					4	4
Undertaker				1		1
VI. CLERICAL	8	1	9	3	2	5
Accountant	1		1	1		1
Clerk	7		7	1		1
Bookkeeper		1	1		1	1
Stenographer				1	1	2
VII. DOMESTIC AND PROFESSIONAL	2	85	87		124	124
Barber	1		1			
Domestic		7	7		15	15
Housewife		77	77		109	109
Laundryman	1		1			
Seamstress		1	1			
VIII. MISCELLANEOUS	94	4	98	201	1	202
Beggar	1		1			
Cabaret performer		1	1			
Charity worker		1	1			
Ditch rider	1		1			
Egg candler	1		1			
Cowboy				1		1
Fisherman	5		5	4		4
Foreman				1		1
Laborer	67		67	76	1	77
Millhand	1		1	4		4
Old soldier	1		1	1		1
Longshoreman				1		1

Table No. 6—Continued.

SHOWING OCCUPATION PRIOR TO ADMISSION OF PATIENTS ADMITTED.

OCCUPATIONS	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
VIII. MISCELLANEOUS—Continued:						
Retired	2	.....	2	3	.....	3
Ex-soldier	1	.....	1	5	.....	5
Soldiers (Camp Lewis).....	9	.....	9	100	.....	100
Spinster .....	.....	1	1	.....	.....	.....
Theatrical .....	.....	1	1	.....	.....	.....
Scissors grinder.....	.....	.....	.....	1	.....	1
Quarryman .....	.....	.....	.....	1	.....	1
Sailor	3	.....	3	3	.....	3
Washerman	1	.....	1	.....	.....	.....
Watchman	1	.....	1	.....	.....	.....
UNKNOWN	2	1	3	13	9	22
NO OCCUPATION.....	9	11	20	8	6	14
Totals.....	238	109	347	339	159	498

Table No. 7.

SHOWING ASSIGNED CAUSES OF INSANITY OF PATIENTS ADMITTED.

CAUSES	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
CONGENITAL—						
Congenital.....	2	3	5	1	.....	1
Hereditary.....	12	11	23	21	16	37
Degenerate.....	3	.....	3	6	.....	6
DISEASES—						
Measles.....	.....	1	1	.....	.....	.....
Typhoid fever.....	1	1	2	1	.....	1
Scarlet fever.....	1	.....	1	.....	.....	.....
Spinal meningitis.....	1	.....	1	.....	.....	.....
La grippe.....	.....	.....	.....	1	.....	1
Other General:						
Senility.....	15	6	21	5	8	13
Diseases of Nervous System and Organs of Special Sense:						
Brain tumor.....	.....	.....	.....	2	.....	2
Cerebral hemorrhage.....	2	1	3	4	2	6
Epilepsy.....	6	3	9	6	1	7
Paresis.....	22	6	28	29	7	36
Paralysis.....	.....	.....	.....	.....	1	1
Cerebral softening.....	1	.....	1	1	.....	1
Diseases of Circulatory System:						
Arterio sclerosis.....	.....	.....	.....	1	3	4
Heart trouble.....	.....	1	1	.....	.....	.....
Blood poison.....	1	.....	1	.....	.....	.....
Diseases of Respiratory System:						
Tuberculosis, pulmonary.....	1	.....	1	.....	.....	.....
Diseases of Digestive System:						
Cancer of stomach.....	.....	.....	.....	1	.....	1
Diseases of Genito-Urinary System:						
Female Organs:						
Menopause.....	.....	4	4	.....	4	4
Pregnancy.....	.....	4	4	.....	3	3
Puerperal.....	.....	4	4	.....	6	6
Female trouble.....	.....	1	1	.....	.....	.....
Menstrual difficulty.....	.....	.....	.....	.....	1	1
Uterine.....	.....	1	1	.....	.....	.....
Gastric trouble.....	.....	.....	.....	.....	1	1
Ill Defined Diseases:						
Nervous breakdown.....	1	1	2	.....	2	2
Male Organs:						
Venereal.....	.....	.....	.....	1	.....	1
EXTERNAL CAUSES—						
Exposure.....	1	.....	1	.....	.....	.....
Fall.....	.....	1	2	.....	.....	.....
Injury.....	3	.....	3	1	.....	1
Injury to head.....	2	.....	2	1	.....	1
Overwork.....	6	1	7	10	4	14
Overstudy.....	1	1	2	.....	1	1
Operation, surgical.....	.....	2	2	1	2	3
Injury to spine.....	.....	.....	.....	1	.....	1
Solitude.....	.....	1	1	1	1	2
Sunstroke.....	.....	.....	.....	1	.....	1
Homesickness.....	.....	.....	.....	2	.....	2
EMOTIONAL—						
Business difficulties.....	.....	.....	.....	2	.....	2
Domestic troubles.....	3	4	7	.....	4	4
Financial affairs.....	3	1	4	1	1	2
Grief.....	2	3	5	.....	4	4
Religious excitement.....	2	7	9	1	4	5
Worry.....	3	1	4	5	11	16
Divorce suit.....	.....	2	2	.....	.....	.....

Table No. 7—Continued.

SHOWING ASSIGNED CAUSES OF INSANITY OF PATIENTS ADMITTED.

CAUSES	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
EMOTIONAL—Continued—						
Fright.....					1	1
Excitement.....	1		1	1		1
Irritable temper.....				1		1
International troubles.....	1		1			
Chorea anemia.....					1	1
MORAL—						
Use of Drugs and Alcoholics:						
Alcohol.....	12	1	13	15	1	16
Drugs.....				2	1	3
Tobacco.....				1		1
Sexual Perversion:						
Masturbation.....	7		7	4		4
Sexual perversion.....	1		1	1		1
UNKNOWN	113	36	149	103	68	171
Soldiers.....	7		7	104		104
Totals.....	238	109	347	339	159	498

Table No. 8.

**SHOWING FORMS OF MENTAL DISEASES OF PATIENTS ADMITTED DURING
THE BIENNIUM ENDING SEPTEMBER 30, 1918.**

MENTAL DISEASES	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
INFECTION PSYCHOSES—						
Fever delirium.....	1		1	1		1
Post infection delirium.....		1	1	1		1
Epitheloma.....				2		2
EXHAUSTION PSYCHOSES—						
Collapse delirium.....					1	1
Acquired neurasthenia.....				1	4	5
Acute confusional insanity.....	1		1			
INTOXICATION PSYCHOSES—						
Alcoholism:						
Chronic alcoholism.....	2		2	1		1
Acute alcoholism.....				2		2
Acute alcoholic hallucinosis.....	9	1	10	3		3
Alcoholic paranoia.....				1	1	2
Morphinism.....				5	1	6
Delirium tremens.....				2		2
DEMENTIA PRAECOX—						
Hebephrenic form.....	27	16	43	34	18	52
Catatonic form.....	3	1	4	9	3	12
Paranoid form.....	35	7	42	31	10	41
Mixed form.....				2		2
Simple form.....				9		9
DEMENTIA PARALYTICA.....	26	7	33	38	6	44
ORGANIC DEMENTIAS—						
Cerebral syphilis.....	2	1	3	9	2	11
Cerebral tumor.....				1	1	2
Cerebral apoplexy.....	3		3	5		5
Cerebral trauma.....	3		3			
Tabetic psychoses.....				1	2	3
Arteriosclerosis insanity.....	1	7	8	3	1	4
INVOLUTION PSYCHOSES—						
Melancholia.....	5	9	14	8	5	13
Pre-senile delusional insanity.....				1	1	2
Senile dementia.....	32	9	41	17	25	42
MANIC DEPRESSIVE INSANITY—						
Manic state.....	33	19	52	34	35	69
Depressive state.....	19	17	36	31	30	61
Mixed state.....	12		12	8		8
Simple.....				1		1
PARANOIA.....	4		4	8	2	10
EPILEPTIC INSANITY.....	8	7	15	9	4	13
THE PSYCHOGENIC NEUROSES—						
Hysterical insanity.....	1		1	1		1
Dread neurosis.....	1		1			
CONSTITUTIONAL INFERIORITY.....	4	4	8	11	3	14
DEFECTIVE MENTAL DEVELOPMENT—						
Imbecility.....	2	2	4		2	2
UNKNOWN (died before histories could be taken) ..		1	1	3		3
Soldiers.....	2		2	47		47
NOT INSANE.....	2		2			
Totals.....	238	109	347	389	159	498

Table No. 9.

SHOWING AGES OF PATIENTS WHO DIED DURING THE BIENNIUM ENDING
SEPTEMBER 30, 1918.

AGES	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
15 and under 20 years.....		1	1	1		1
20 and under 25 years.....	1		1	3		3
25 and under 30 years.....	4	7	11	5	3	8
30 and under 35 years.....	6	1	7	3	3	6
35 and under 40 years.....	10	4	14	9	2	11
40 and under 45 years.....	11	5	16	7	2	9
45 and under 50 years.....	8	1	9	9	8	17
50 and under 55 years.....	6	4	10	13	2	15
55 and under 60 years.....	7	1	8	4	2	6
60 and under 65 years.....	6	3	9	10	5	15
65 and under 70 years.....	12	3	15	9	1	10
70 and under 75 years.....	9		9	5	3	8
75 and under 80 years.....	7	1	8	5	8	13
80 and under 85 years.....	5	1	6	6	4	10
85 and under 90 years.....	1	1	2			
90 and under 95 years.....	3		3			
Ages unknown.....	2		2	6	2	8
Totals.....	98	33	131	95	45	140

Table No. 10.

DURATION OF MENTAL DISEASE OF PATIENTS WHO HAVE DIED DURING
THE BIENNIUM ENDING SEPTEMBER 30, 1918.

DURATION OF DISEASE	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Under 1 month.....	21	9	30	13	7	20
1 to 2 months.....	3	2	5	5	7	12
2 to 4 months.....	7	3	10	7	3	10
4 to 6 months.....	2	3	5	14	3	17
6 to 9 months.....	9	3	12	5	2	7
9 to 12 months.....	4	1	5	2	2	4
12 to 18 months.....	6	3	9	7	2	9
18 months to 2 years.....	5	3	8	6	1	7
2 to 4 years.....	12	4	16	9	7	16
4 to 6 years.....	7		7	8	5	13
6 to 10 years.....	6	1	7	3	5	8
10 to 15 years.....	9	1	10	4		4
15 to 20 years.....	2		2	2		2
20 to 25 years.....	1		1	1	1	2
Over 25 years.....	4		4	4		4
Soldiers (less than 1 month).....						
Totals.....	98	33	131	95	45	135

Table No. 11.
CAUSES OF DEATH OF PATIENTS.

CAUSE OF DEATH	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
GENERAL DISEASES—						
Cancer of the stomach.....				2	2	4
Cancer of the liver.....		1	1			1
Cancer of the lower jaw.....				1		1
Septicemia following self-inflicted traumatism with fracture of tibia.....				1		1
Tuberculosis of the lungs.....	11	1	12	12	4	16
Tuberculosis of the abdomen.....		1	1			
DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE—						
Cerebral apoplexy.....		3	3	1	2	3
Cerebral hemorrhage.....	6		6	9	1	10
General paralysis of insane.....	26	9	35	21	2	23
Cerebro spinal syphilis.....		1	1			
Cerebral anemia.....		1	1			
Cerebral trauma with exhaustion.....				1		1
Exhaustion psychoses, collapse delirium.....					1	1
Dementia praecox, catatonic form with ex- haustion.....	1		1			
Dementia praecox, paranoid form with ex- haustion.....	1		1			
Dementia praecox, hebephrenic form with ex- haustion.....				1	1	2
Senile dementia with exhaustion.....	11		11	6	2	8
Manic depressive insanity, manic type with exhaustion.....	7	1	8	1		1
Manic depressive insanity, mixed type with exhaustion.....					1	1
Manic depressive insanity, depressed type with exhaustion.....		2	2			
Involution psychoses melancholia with ex- haustion.....		1	1		1	1
Exhaustion psychoses, acute mania.....					2	2
Status epilepticus.....	3	1	4	5	1	6
Brain tumor.....					1	1
DISEASES OF THE CIRCULATORY SYSTEM—						
Arterio sclerosis.....	1		1	1	4	5
Atheroma.....	1		1		1	1
Endocarditis, chronic.....	3		3			
Myocarditis, acute.....	2		2			
Myocarditis, chronic.....	8		8	5	1	6
Mitral insufficiency with broken compensation..	1	1	2	1		1
Acute dilatation of the heart.....					1	1
Mitral regurgitation.....					1	1
DISEASES OF THE RESPIRATORY SYSTEM—						
Asthma.....				1		1
Pneumonia, broncho.....				2	5	7
Pneumonia, lobar.....	3	1	4	4	2	6
Pneumonia, hypostatic.....		1	1			
DISEASES OF THE DIGESTIVE SYSTEM—						
Enteritis, acute, with diarrhea.....	1		1	1	2	3
Ulcers of the stomach with fatal hemorrhage..	3		3			
Typhoid fever.....				2		2
DISEASES OF THE GENITO-URINARY SYSTEM—						
Nephritis, chronic interstitial.....	3	3	6	2	3	5
Nephritis, acute parenchymatous.....		1	1			
Nephritis, chronic parenchymatous.....	1		1	1	1	2
Diabetes mellitus.....	1		1	1	2	3

Table No. 11—Continued.
CAUSES OF DEATH OF PATIENTS.

CAUSE OF DEATH	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
AFFECTIONS PRODUCED BY EXTERNAL CAUSES—						
Shock following removal of sequestered carcum.....		1	1			
Suicide, self-inflicted wound with hat pin.....		1	1			
Suicide, acute mercurial poisoning.....		1	1			
Suicide by hanging.....					1	1
Suicide, jumped over railing third floor.....	1		1			
Electricity, accidental shock through electrified fence.....	2		2			
Suicide by cutting throat.....				1		1
Suicide by drowning in bath tub.....				1		1
Strangulation (choked while eating).....				1		1
Soldiers (cause unknown).....				4		4
Gangrene of left foot (senile).....				1		1
UNKNOWN (died on parole and escape).....	1	1	2	5		5
Totals.....	98	33	131	95	45	140

Respectfully submitted,

WM. N. KELLER, Superintendent,

J. B. LAUGHARY, Acting Superintendent.

EASTERN STATE HOSPITAL.

To the State Board of Control:

Gentlemen: I herewith submit for your consideration, as required by law, the Ninth Biennial Report of the Eastern State Hospital, located at Medical Lake, covering the two years beginning October 1, 1916, and ending September 30, 1918.

Changes in Population—The total census, inmates in hospital and on parole, at the beginning of the present biennium was 1,142, of which 770 were males and 372 females. Patients to the number of 171 and 89, or a total of 260, were received during the year ending September 30, 1917. Vacancies created from discharges and paroles were 172; from death, 77, leaving the actual population in the hospital at the end of the first year at 1,153.

At the beginning of the second year the total census of patients in the hospital and on parole was 1,270. During this year 241 new cases were received. Vacancies were created by 202 discharges and deaths, and 129 paroles, leaving the actual population in the hospital at the end of the biennium at 1,180.

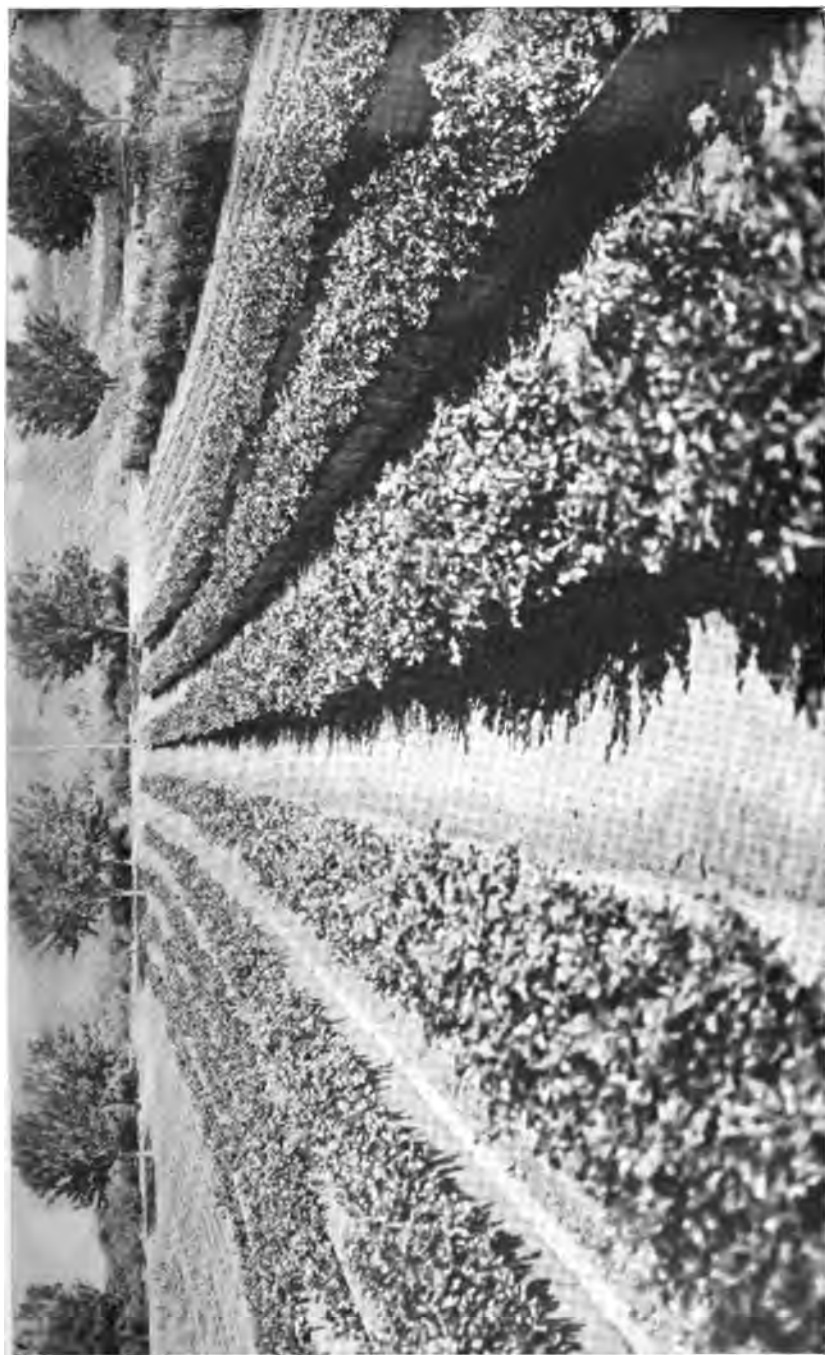
The net gain in resident population during the biennium is 8% per cent.

General Conditions—The general health of patients at this institution has been remarkably good and there has been no outbreak of any contagious diseases, although a few sporadic cases of diphtheria and erysipelas have occasionally developed. This is evidence that good sanitation and hygiene have been carried out, as is also further borne out by the fact that the death rate at this institution is among the lowest for similar institutions in this country.

Since war was declared by the United States there has been, from time to time, certain restrictions in the matter of all maintenance supplies to conform with the federal regulations, which we have endeavored to carry out strictly. This, together with the greatly increased cost of all supplies, has occasionally affected, to a considerable degree, our standard of living, but by strict economy and saving, repairing whenever possible, this institution has been able to come through the biennium and still keep within its per capita daily allowance of 46½ cents a day.

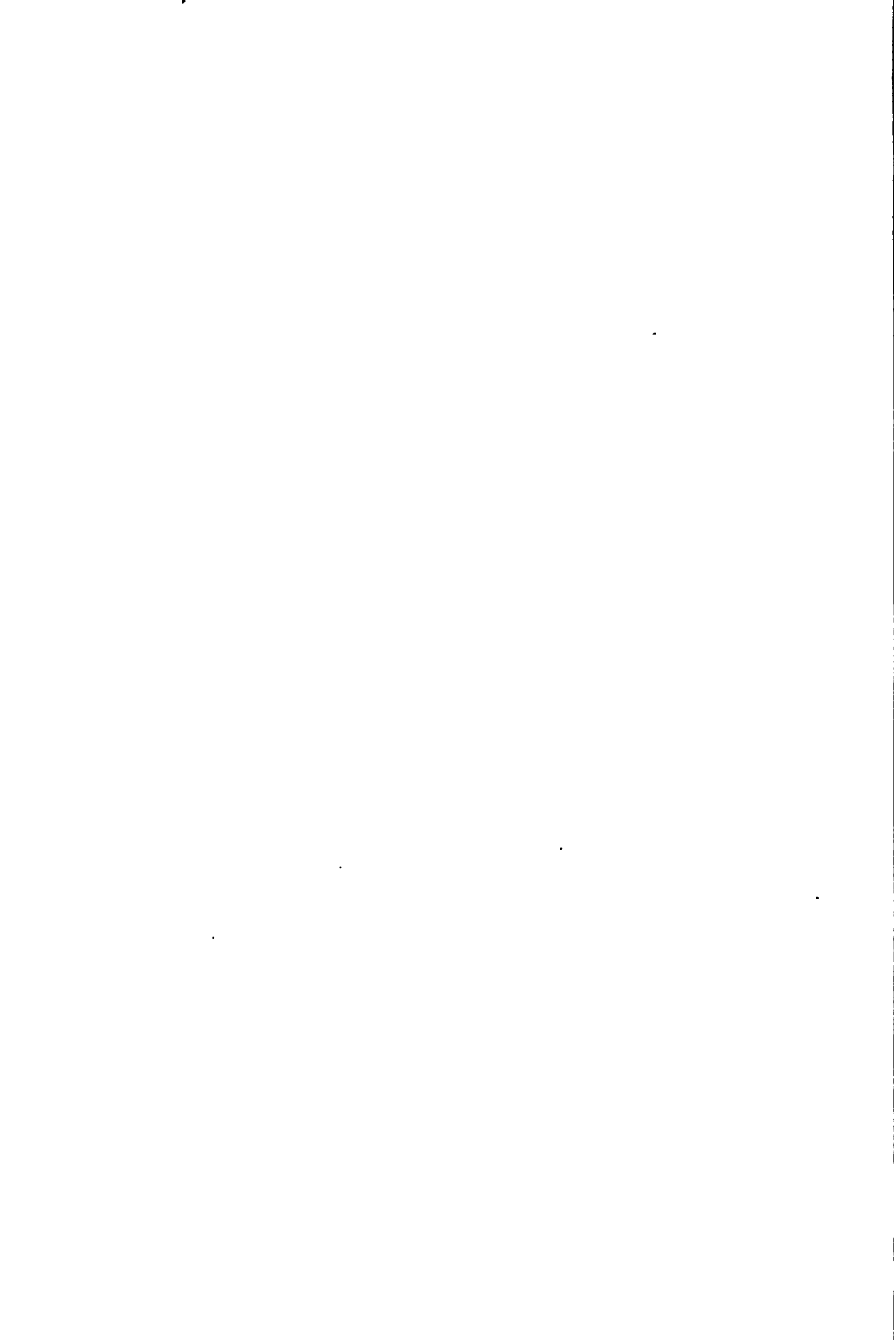
The most serious difficulty the institution has had to face is that of obtaining and maintaining a sufficient force of good attendants. At the present time we are seriously short of efficient help. This has rendered conditions particularly bad at times, because this institution is the only one in the State that cares for the criminal insane, many of whom are desperate characters and are usually ready to take quick advantage of any opportunity to escape or do violence.

Occupational employment of patients has been carried out as extensively as usual. The farm affords employment for over 300 at seasons. The different departments of dairy, piggery, hennery, carpenter and machine



LUXURIANT GROWTH OF CELERY, EASTERN STATE HOSPITAL





shops, laundry, bakery, harness and shoe shops employ many more. The female patients are occupied in dining rooms, ward work, sewing rooms and gathering of berries and vegetables in summer.

Amusements are regularly afforded by dances, motion pictures and outdoor games and recreation.

Fire drill for patients and fire department composed of attendants regularly once a week.

War Service—The following officers and attendants have entered the military service in some branch, going directly from the institution:

Dr. A. J. Wise, assistant physician.	S. M. Martin, attendant.
Paul Staley, dairyman.	Earl Burke, attendant.
August Ripkie, attendant.	George Irvine, attendant.
George H. Jargerson, attendant.	Joseph Bednoschëck, attendant.
George Hopkins, attendant.	William Bowlby, attendant.
Lloyd Olson, attendant.	M. L. Parsons, attendant.
George Renkert, storekeeper.	R. S. Rodarmel, attendant.
Ben Jones, attendant.	Paul Webber, attendant.
Howard Hawks, attendant.	William Rigney, attendant.
A. L. Towner, poultryman.	S. C. Harrison, attendant.
C. L. Sinks, attendant.	F. E. Chester, attendant.
W. F. Hiner, attendant.	R. E. Angel, traveling attendant.

Red Cross work has been engaged in by both female attendants and patients, making the following list of articles:

Pajamas	Layettees	Surgical gowns
Refugee skirts	Quilts	Sweaters
Hospital socks	Convalescent robes	Wristlets
Ambulance pillows	Hospital mops	Refugee shirts
Bed shirts	Afhans	Refugee dresses
Socks		

The officers and employees have subscribed \$18,250.00 in the Liberty Loans, and \$7,200.00 in War Savings Stamps.

Farm Operations—General farming at this institution has been a source of great disappointment during the past two seasons, due to prolonged drouths in this section. With normal conditions, we should have made a record and produced a large surplus, instead of having to buy such produce as hay, stock feed, potatoes, etc. During the first year of the biennium we farmed 760 acres, against 619 the year before. During the present year we increased our farm operations to 850 acres by renting 140 acres from private individuals. The farming operations have been almost doubled in three years.

Our gardens, which are under irrigation, produced enormous returns in vegetables of all kinds.

The orchards have also produced well, so that we were able to can and store up a large supply of fruits, jellies, etc.

The institution still raises all the milk used; also all the pork, ham, bacon, lard, chickens and eggs, except during moulting period.

We are still putting forth every effort to increase farm production and expect to enlarge the acreage tilled to the limit of our capacity to cultivate.

Alien and Non-resident Insane—Owing to conditions created by the war, deportation of alien insane has been practically stopped for an indefinite time, except to Canada. Due to the extreme shortage of attendants, it

has been difficult to deport non-residents from this State. However, one alien and fifteen non-resident insane were returned to their respective states, mostly without expense to this State.

The last Legislature made an appropriation for "deportation of alien and non-resident insane." We have many patients committed to this institution who are recent arrivals from other states, but claim Washington as their home, though not in the State long enough to establish rights of citizenship. They or their relatives resist efforts made to return them to the states from which they come. So the question arises as to what is meant by "non-resident." There is nothing in the statutes defining the term and the only reference to such a term as applied to the insane occurs in Section 5960, Remington & Ballinger's Code, which says: "Non-residents of this State conveyed or coming herein while insane shall not be committed to nor supported in the hospital for the insane," etc. This statute only deals with those who are insane upon coming to the State and not those who become insane and become public charges after a residence of a few weeks or months.

There should be enacted a statute accurately defining the term "non-resident insane," and the conditions under which their deportation is to be carried out. However, it should be remembered that Washington is a young state and encourages immigration, so that a drastic law along such lines would work a hardship on many bonafide settlers.

Improvements—The storeroom has been enlarged, old floor removed and replaced by concrete, walls plastered and jointed, new arrangements of the interior effected, which makes it modern and convenient in every particular.

The old sheds at the recreation grounds for the patients, which had become decayed and unsanitary, have been replaced by new, clean and sanitary structures, affording seating capacity for patients not wishing to engage in active exercise, and protection from inclement weather.

Five new pig houses and farrowing pens have been erected at the piggery to take care of overcrowding and increase in the herd.

A new sanitary barn has been erected to take care of the cows from dairy herd during calving time.

The chicken yards have been improved in convenience of arrangement and addition of interior improvements.

Our local automatic telephone system has been extended to the out-houses.

The power and light system is being extended to the farm, three miles distant.

New scales to the capacity of ten tons have been installed to facilitate the weighing of freight, farm produce, etc.

A three and one-half-ton Signal truck was purchased and has been in constant use, greatly facilitating the handling of coal, freight and farm produce, and avoiding the necessity of taking working horses from the field when needed for plowing, harvesting, etc.

A section of the old basement adjoining the storeroom has been cleaned of rubbish and fixed up with concrete floor and painted to increase storage room.

Another basement under the first detached building has been fixed up and floored and is being used to store waste paper and rags for market, instead of destroying.

The lawns have been improved by the extension of the system of concrete sidewalks, so that it is now possible to visit every ward and ward building without getting in the mud during bad weather. The walks are so arranged that they make two large rectangles, one near the male wards and one near the female wards. This enables all patients who are physically able to get out morning and afternoon during the winter weather for walking exercise.

A new lathe was purchased and installed in the machine shop, enabling turns and repair work to be done which was formerly necessary to send to Spokane at considerable delay and expense.

Material for an additional wing to the greenhouse has been negotiated for and will be erected this winter.

A new piano was purchased and placed in the chapel for entertainment of the patients.

Four work teams of mules and horses were purchased to replace old stock and take care of the increased farm operations.

A Holstein bull was purchased for the dairy herd.

Two thoroughbred boars were purchased for the piggery.

A new road was surveyed and graded to allow more easy access to the addition to the farm due to the purchase of the Peat ranch, on opposite side of Little Medical Lake.

Several new items of farm machinery have been added to our equipment.

A new road has been made to the buildings of the Old School for Feeble Minded that have been turned over to the hospital and which we expect to repair this winter to take care of the increase in population during the next biennium.

Several old dormitories have been stripped of wainscoting and hard plastered, to do away with certain vermin of nocturnal habits.

Painting of outbuildings, painting and calciming interior of main wards has been done.

Setting out of many additional fruit trees has materially enlarged our orchard.

Appropriations for Next Biennium—Since the appropriations for the current biennium were made there has been, as everyone has experienced, radical changes in the prices of foods, clothing, supplies of every description. By actual figures it was found that the average increase in price of eighteen of the main staple articles used at the institution at the conclusion of this biennium, as compared to the time when appropriations were last asked for, amounted to about 88 per cent., and the end is not yet in sight. By dint of rigid economy in use of supplies, cutting off all small luxuries that lessen the monotony of existence for many of our inmates, patching old clothes and shoes that formerly would have been discarded, making underwear of flour sacks instead of using them for dish rags, substitution of home-made gravies to replace the use of high priced butter, and numerous other similar practices, has enabled the Eastern State Hospital to conclude the biennium with an actual daily per capita cost of about 45½ cents. But in

doing so we have used up any extras or surplus we may have accumulated, or to use a slang expression that fits the situation, the "velvet" is all gone. So the estimate of the budget for the next biennium for this institution, owing to unstable conditions, cannot be based on anything very definite.

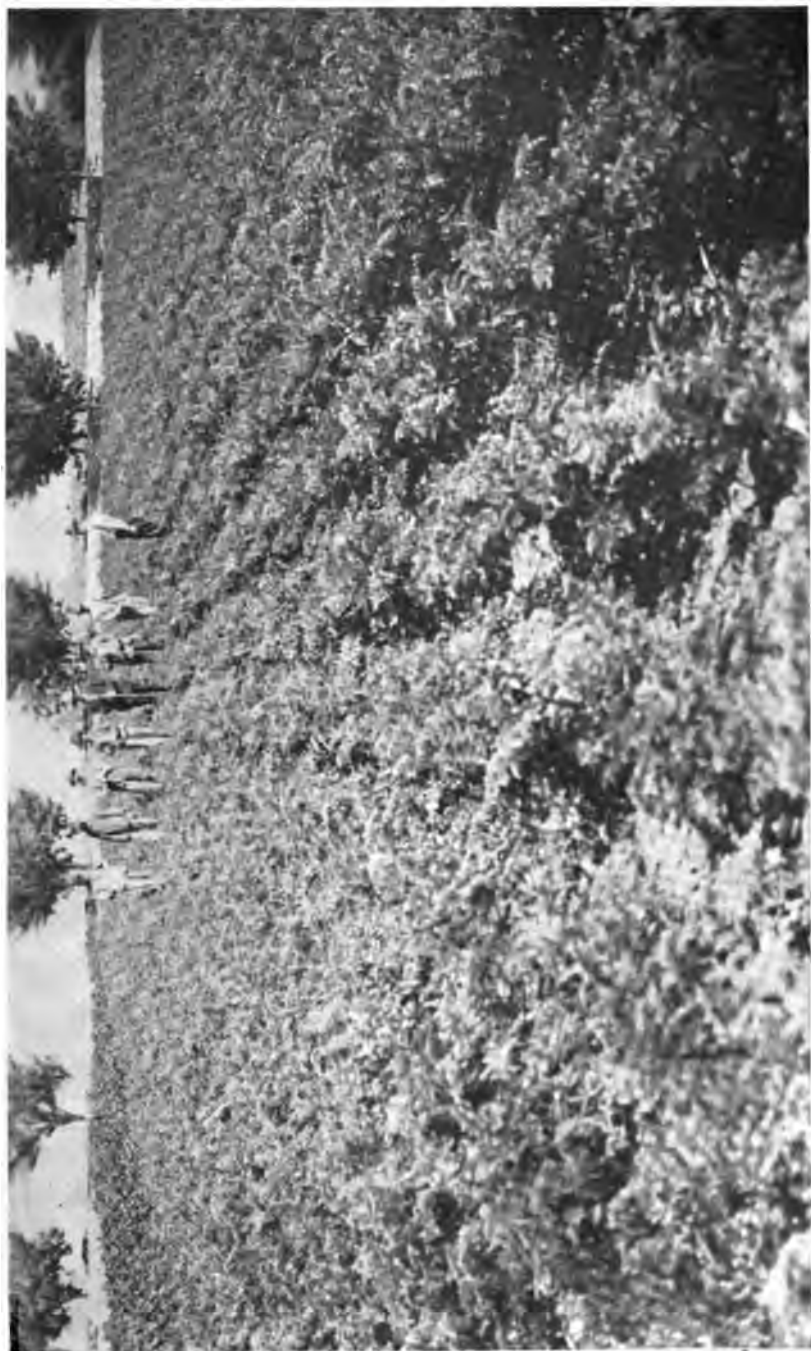
The following figures are based on an expected normal increase in population to 1,335, plus 200 additional patients which, I was informed by the board, it would be necessary to transfer from the Northern State Hospital because new ward buildings could not be erected.

Estimate of budget for population of 1,535 for biennium ending March 31, 1921:

Salaries and wages.....	\$197,240 00
Supplies, material and service.....	472,354 00
Capital outlays.....	24,587 00

Total appropriation requested.....\$694,181 00

A detailed statement of the different items included in this estimate has been rendered to the board according to the form required by the Bureau of Inspection and Supervision of Public Offices.



CARROTS BEING CULTIVATED BY INMATES AT EASTERN STATE HOSPITAL.



Appended is a series of fifteen tables covering the different statistics of this institution for the biennium:

Table No. 1.
SHOWING MONTHLY ADMISSIONS, DISCHARGES AND DEATHS.

MONTHS	ADMISSIONS			DISCHARGES			DEATHS			Daily Average
	Male	Fe- male	Total	Male	Fe- male	Total	Male	Fe- male	Total	
October, 1916.....	12	7	19	.....	2	2	1	2	3	1,067.48
November, 1916.....	11	5	16	.....	1	1	3	3	6	1,072.00
December, 1916.....	16	10	26	2	.....	2	5	.....	5	1,082.45
January, 1917.....	19	8	27	2	.....	2	5	.....	6	1,104.19
February, 1917.....	16	9	25	2	1	3	5	2	7	1,121.30
March, 1917.....	9	9	18	4	4	8	5	2	7	1,133.16
April, 1917.....	21	10	31	1	2	3	5	2	7	1,144.66
May, 1917.....	14	4	18	17	3	20	2	3	5	1,150.96
June, 1917.....	9	9	18	.....	2	2	6	2	8	1,149.53
July, 1917.....	16	7	23	1	.....	1	11	.....	11	1,154.22
August, 1917.....	10	7	17	4	1	5	4	8	7	1,157.96
September, 1917.....	18	4	22	2	4	6	5	.....	5	1,148.76
October, 1917.....	7	8	15	3	24	27	2	7	9	1,147.9
November, 1917.....	14	2	16	4	.....	4	4	1	5	1,142.88
December, 1917.....	12	7	19	4	1	5	4	3	7	1,135.77
January, 1918.....	9	8	12	35	3	39	8	2	10	1,138.24
February, 1918.....	10	4	14	2	1	3	8	2	10	1,139.2
March, 1918.....	12	12	24	3	1	4	6	5	11	1,140.32
April, 1918.....	17	5	22	1	3	4	4	6	10	1,145.9
May, 1918.....	21	8	29	7	1	8	4	2	6	1,154.6
June, 1918.....	17	9	26	.....	1	1	7	3	10	1,164.6
July, 1918.....	14	9	23	3	3	6	2	1	3	1,174.61
August, 1918.....	12	6	18	7	.....	7	.....	3	3	1,173.12
September, 1918.....	13	10	23	3	.....	3	6	1	7	1,182.13
Totals.....	329	172	501	108	58	166	112	56	168	

Table No. 2.
SHOWING NATIVITY OF PATIENTS ADMITTED.

COUNTRIES	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Austria.....	4	1	5	5	1	6
Canada.....	7	2	9	7	1	8
China.....	.....	.....	.....	1	.....	1
Denmark.....	3	.....	3	1	.....	1
England.....	2	3	5	1	1	2
Finland.....	1	.....	1	2	.....	2
France.....	1	1	2	.....	.....	.....
Germany.....	12	5	17	7	2	9
Greece.....	2	.....	2	2	.....	2
Hawaii.....	1	.....	1	.....	.....	.....
Holland.....	.....	.....	.....	1	.....	1
Ireland.....	2	2	4	1	3	4
Italy.....	2	.....	2	4	.....	4
Japan.....	.....	.....	.....	1	.....	1
Norway.....	5	4	9	3	2	5
Russia.....	2	4	6	8	3	11
Scotland.....	.....	.....	.....	2	5	7
Sweden.....	9	3	12	5	3	8
Switzerland.....	1	.....	1	.....	1	1
Wales.....	.....	.....	.....	1	.....	1
Other countries.....	2	.....	2	1	.....	1
Unascertained.....	23	2	25	14	.....	14
United States.....	92	59	151	91	61	152
Totals.....	171	89	260	158	83	241

Table No. 3.
SHOWING COUNTIES PATIENTS ADMITTED FROM.

	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Adams.....	1	.....	1	1	.....	1
Asotin.....	1	2	3	1	3	4
Benton.....	4	.....	4	3	1	4
Chelan.....	8	2	10	3	2	5
Columbia.....	3	2	5	2	1	3
Douglas.....	1	1	2	2	1	3
Ferry.....	3	.....	3	1	1	2
Franklin.....	2	3	5	4	3	7
Garfield.....	1	1	2	.....	.....	.....
Grant.....	2	3	5	1	2	3
King.....	.....	2	2	4	.....	4
Kittitas.....	1	.....	1	.....	1	1
Klickitat.....	.....	2	2	1	1	2
Lincoln.....	2	2	4	4	6	10
Okanogan.....	5	4	9	6	2	8
Pend Oreille.....	1	.....	1	1	1	2
Penitentiary.....	11	.....	11	6	.....	6
Pierce.....	1	.....	1	.....	.....	.....
Reformatory.....	4	.....	4	1	.....	1
Skamania.....	1	2	3	2	.....	2
Spokane.....	83	47	130	92	37	129
Stevens.....	19	6	25	7	7	14
Snohomish.....	.....	.....	.....	1	.....	1
Walla Walla.....	5	3	8	5	9	14
Whitman.....	10	6	16	9	5	14
Yakima.....	.....	.....	.....	1	.....	1
Grays Harbor.....	1	.....	1	.....	.....	.....
Thurston.....	1	.....	1	.....	.....	.....
Western State Hospital.....	.....	1	1	.....	.....	.....
Totals.....	171	89	260	158	83	241

Table No. 4.
SHOWING CIVIL CONDITION OF PATIENTS ADMITTED.

CIVIL CONDITION	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Married.....	55	58	113	59	54	113
Single.....	89	19	108	75	12	87
Widowed.....	4	7	11	3	10	13
Divorced.....	1	1	2	1	2	3
Unknown.....	22	4	26	20	5	25
Totals.....	171	89	260	158	83	241

Table No. 5.
SHOWING OCCUPATION OF PATIENTS ADMITTED.

OCCUPATIONS	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Agent.....				1		1
Baker.....	1		1			
Barber.....	3		3	1		1
Blacksmith.....	3		3			
Butcher.....				1		1
Bricklayer.....	1		1			
Bookkeeper and stenographer.....		1	1			
Carpenter.....	8		8	2		2
Cigar maker.....				1		1
Clerk.....	2	1	3	1	2	3
Cook.....	2	2	4	1		1
Detective.....				1		1
Domestic.....		11	11		13	13
Engineer.....	4		4	5		5
Electrician.....	1		1	2		2
Farmer.....	35		35	47		47
Housewife.....		54	54		53	53
Harness maker.....	4		4	1		1
Hotel man.....				1		1
Laborer.....	55		55	56		56
Lawyer.....	1		1			
Laundryman.....	1		1	1		1
Lumberman.....	1		1			
Mail carrier.....	1		1	1		1
Mechanic.....	1		1	2		2
Merchant.....	1		1	2		2
Miner.....	4		4	1		1
None.....	5	4	9	5	5	10
Nurse.....					1	1
Painter.....				1		1
Physician.....	2	1	3			
Plumber.....				1		1
Preacher.....	2		2			
Prostitute.....		1	1			
Printer.....	1		1			
Railroad laborer.....	2		2	2		2
Railroad conductor.....				1		1
Real estate.....				2		2
Sailor.....	1		1			
Salesman.....	4		4	2		2
School teacher.....		4	4		1	1
Shoemaker.....				2		2
Soldier.....				1		1
Student.....	2		2	1	2	3
Seamstress.....		2	2		2	2
Shepherd.....	1		1			
Tailor.....	1		1	2		2
Teamster.....	2		2	1		1
Unknown.....	19	8	27	8	4	12
Totals.....	171	89	260	158	83	241

Table No. 6.
SHOWING ASSIGNED CAUSES OF DISEASES.

CAUSES	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Alcohol.....	7		7	9	1	10
Childbirth.....		1	1			
Domestic trouble.....				1	5	6
Dissipation.....		1	1	1		1
Epilepsy.....	3	1	4	5	1	6
Exposure.....	1		1	1		1
Heredity.....	12	18	30	9	7	16
Injury to head.....	6	1	7	6	1	7
Isolation.....	1		1	1		1
Masturbation.....	6		6	5	1	6
Menopause.....		2	2		1	1
Morphine.....	1		1			
Nephritis.....						
Overwork.....	3	1	4	3	1	4
Puerperal.....		1	1		2	2
Pregnancy.....		1	1		2	2
Religion.....	3	4	7	5	3	8
Senility.....	8	3	12	12	8	20
Syphilis.....	14	2	16	10		10
Worry over business.....	1	1	2	3		3
Worry over love affair.....	1	1	2			
Worry over family affairs.....		4	4	1	1	2
Worry over loss of relative.....					1	1
Worry over European war.....	2	1	3			
Unknown.....	101	46	147	86	48	134
Totals.....	171	89	260	158	83	241

Table No. 7.
SHOWING AGES OF PATIENTS ADMITTED.

AGES	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Between 10 and 15 years.....				1		1
Between 15 and 20 years.....	4	1	5	5		5
Between 20 and 25 years.....	9	9	18	9	9	18
Between 25 and 30 years.....	17	15	32	13	6	19
Between 30 and 35 years.....	17	12	29	25	6	31
Between 35 and 40 years.....	24	12	36	28	14	42
Between 40 and 45 years.....	18	6	24	11	9	20
Between 45 and 50 years.....	15	6	21	13	7	20
Between 50 and 55 years.....	8	9	17	6	9	15
Between 55 and 60 years.....	10	5	15	11	8	19
Between 60 and 65 years.....	5	6	11	4	4	8
Between 65 and 70 years.....	8	2	10	8	1	9
Between 70 and 75 years.....	5	3	8	7	1	8
Between 75 and 80 years.....	8		8	1	3	4
Between 80 and 85 years.....				4	2	6
Between 85 and 95 years.....	3	1	4	3	3	6
Unknown.....	20	2	22	9	1	10
Totals.....	171	89	260	158	83	241



HOW ONIONS ARE ALLOWED TO CURE, EASTERN STATE HOSPITAL.

Table No. 8.
SHOWING DURATION OF DISEASE PRIOR TO LAST ADMISSION.

DURATION	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Under 1 month.....	56	23	82	29	17	46
1 to 3 months.....	11	16	27	22	6	28
3 to 6 months.....	7	8	15	9	6	14
6 to 12 months.....	7	3	10	13	9	22
1 to 2 years.....	20	6	26	13	11	24
2 to 5 years.....	11	14	25	21	20	41
5 to 10 years.....	4	2	6	3	2	5
10 to 20 years.....	1	3	4	3	1	4
20 to 25 years.....	.....	1	1	.....	4	4
Congenital.....	2	1	3	.....	1	1
Unknown.....	52	9	61	46	6	52
Totals.....	171	80	260	158	83	241

Table No. 9.
SHOWING NUMBER OF ATTACKS OF PATIENTS ADMITTED.

NUMBER OF ATTACKS	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
First attack.....	87	38	125	86	45	131
Second attack.....	16	19	35	25	16	41
Third attack.....	8	7	15	3	2	5
Fourth attack.....	4	1	5	1	1	2
Fifth attack.....	.....	1	1	.....	3	3
Sixth attack.....	1	.....	1	1	.....	1
Eleventh attack.....	.....	1	1	.....	.....	.....
Unknown.....	43	7	50	33	2	35
Several attacks.....	12	15	27	9	14	23
Totals.....	171	80	260	158	83	241

Table No. 10.
PSYCHOSES OF FIRST ADMISSIONS.

PSYCHOSES	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
TRAUMATIC PSYCHOSES.....				1		1
SENILE PSYCHOSES—						
Simple deterioration.....	16	4	20	18	11	29
Presbyophrenic type.....		2	2		1	1
Delirious and confused states.....	2	1	3	1	1	2
Depressed and agitated states in addition to deterioration.....	1	1	2	1	1	2
Paranoid states in addition to deterioration....	6		6	4	1	5
Pre-senile types.....					1	1
PSYCHOSES WITH CEREBRAL ARTERIO- SCLEROSIS.....	8	1	4	8		3
GENERAL PARALYSIS.....	17		17	14	6	20
PSYCHOSES WITH CEREBRAL SYPHILIS.....	1	2	3	1		1
PSYCHOSES WITH HUNTINGTON'S CHOREA.						
PSYCHOSES WITH BRAIN OR NERVOUS DIS- EASES—				1		1
Cerebral embolism.....						
ALCOHOLIC PSYCHOSES—	1		1			
Acute hallucinosis.....				1		1
Chronic paranoid type.....	2		2	1		1
Alcoholic deterioration.....		1	1	1		1
PSYCHOSES DUE TO DRUGS AND OTHER EXOGENOUS TOXINS—						
Opium (and derivatives), cocaine, bromides, chloral, etc., alone or combined.....	2		2		1	1
Metals, as lead, arsenic, etc.....	1		1			
PSYCHOSES WITH SOMATIC DISEASES—						
Exhaustion delirium.....	4	3	7	2		2
Delirium of unknown origin.....					2	2
Diseases of the ductless glands.....					1	1
Cardio-renal disease.....	2		2		2	2
MANIC-DEPRESSIVE PSYCHOSES—						
Manic type.....	9	6	15	9	8	17
Depressive type.....	37	9	46	25	14	39
Stupor.....		1	1		1	1
Mixed type.....	5	10	15	9	9	18
Circular type.....	1	1	2		1	1
DEMENTIA PRAECOX—						
Paranoid type.....	26	9	35	27	4	31
Katatonie type.....	5	9	14	7	2	9
Hebephrenic type.....	12	10	22	19	6	25
Simple type.....		2	2	1	2	3
PARANOIA AND PARANOIC CONDITIONS.....	1	1	2			
EPILEPTIC PSYCHOSES—						
Deterioration.....	5	2	7	5	1	6
Clouded states.....	2	2	4	1		1
Other conditions.....				1		1
PSYCHONEUROSES AND NEUROSES—						
Psychasthenic type.....					1	1
Neurasthenic type.....					2	2
Anxiety neuroses.....					2	2

Table No. 10—Continued.
PSYCHOSES OF FIRST ADMISSIONS.

PSYCHOSES	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
PSYCHOSES WITH CONSTITUTIONAL PSYCHOPATHIC INFERIORITY.....	1	5	6	.....	.....	.....
PSYCHOSES WITH MENTAL DEFICIENCY.....	1	1	2	.....	.....	.....
UNDIAGNOSED PSYCHOSES.....	.....	.....	.....	.....	1	1
NOT INSANE—	.....	.....	.....	.....	.....	.....
Epilepsy without psychosis.....	.....	.....	.....	.....	1	1
Constitutional psychopathic inferiority with-	.....	.....	.....	.....	.....	.....
out psychosis.....	1	2	3	1	1	2
Mental deficiency without psychosis.....	3	1	4	2	1	3
Others.....	4	.....	4	2	.....	2

Table No. 11.
SHOWING FORMS OF INSANITY OF PATIENTS DISCHARGED.

FORM OF DISEASE	Year Ending September 30, 1917						Year Ending September 30, 1918					
	Recovered			Unimproved			Recovered			Unimproved		
	Male	Fe- male	Total	Male	Fe- male	Total	Male	Fe- male	Total	Male	Fe- male	Total
Traumatic.....												
Senile.....				1	1	2			2	1		4
With cerebral arterio sclerosis.....												
General paralysis.....												
With cerebral syphills.....					1					1		1
With Huntington's chorea.....												
With brain tumor.....												
With other brain or nervous diseases.....												
Alcoholic.....									1	1		1
Due to drugs and other exogenous toxins.....	3		3						2			
With pellagra.....										1		1
With other somatic diseases.....	1		1									
Manic-depressive.....	14	6	20	2	1	3			1			1
Involution melancholia.....									20	18	2	6
Dementia praecox.....	2		2	8	3	11	1	2	5	10	12	13
Paranoia or paranoid condition.....		1	1								4	1
Epileptic psychoses.....											1	1
Psychoneuroses and neuroses.....												
With constitutional psychopathic inferiority.....	1		1		1	1				1	1	1
With mental deficiency.....												
Undiagnosed psychoses.....												
Not insane.....	2		2						3	1	1	
Totals.....	23	8	30	10	5	15	4	6	10	34	24	58
										22	7	29
										17	7	24

Table No. 12.
SHOWING CAUSES OF DEATH.

CAUSES	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Arterio sclerosis.....	7	1	8	14	5	19
Carcinoma of breast.....					1	1
Carcinoma of lip.....	1		1			
Carcinoma of sigmoid.....					1	1
Cerebral hemorrhage.....	6		6	5	2	7
Cerebral syphilis.....		1	1			
Dementia praecox.....		1	1	1		1
Dementia, senile.....	1	2	3		2	2
Epilepsy, exhaustion from.....	2	2	4	7		7
Huntington's chorea.....				1		1
Myocarditis, chronic.....	3	2	5		3	3
Mitral regurgitation.....	1		1	5	1	6
Nephritis, acute.....				1		1
Paralytica, dementia.....	15	1	16	13	4	17
Pernicious anemia.....	1	1	2			
Pneumonia, broncho.....	1	1	2		1	1
Pneumonia, lobar.....	4	1	5		3	3
Suffocation during epileptic convulsion.....		1	1	1		1
Tuberculosis, pulmonary.....	3		3	4		4
Tuberculous enteritis.....					1	1
Tuberculous peritonitis with obstruction of bowel.....		1	1		1	1
Uterus, fibroma of (laparotomy).....					1	1
Exhaustion from manic depressive insanity.....	1	1	2	2		2
Exhaustion delirium.....	7	4	11	3	6	9
Paralytic ileus following laparotomy.....	1		1			
Suicide by hanging, strangulation, etc.....	2	1	3	2		2
Totals.....	56	21	77	59	32	91

Table No. 13.
SHOWING AGES OF PATIENTS WHO DIED IN HOSPITAL.

AGES	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Between 10 and 15 years.....						
Between 15 and 20 years.....						
Between 20 and 25 years.....				3	1	4
Between 25 and 30 years.....	2	2	4	4	1	5
Between 30 and 35 years.....	5	2	7	2	1	3
Between 35 and 40 years.....	10	4	14	4	1	5
Between 40 and 45 years.....	5	1	6	4	1	5
Between 45 and 50 years.....	7		7	6	1	7
Between 50 and 55 years.....	2	3	5	10	5	15
Between 55 and 60 years.....	2	2	4	5	7	12
Between 60 and 65 years.....	2	2	4	4	1	5
Between 65 and 70 years.....	7	1	8	2	2	4
Between 70 and 75 years.....	5	1	6	5	2	7
Between 75 and 80 years.....	7	2	9	3	2	5
Between 80 and 85 years.....				2	4	6
Between 85 and 95 years.....	1		1	5	2	7
Unknown.....	1	1	2		1	1
Totals.....	56	21	77	59	32	91

Table No. 14.
SHOWING NUMBER OF ADMISSIONS, RECOVERIES AND DEATHS.

YEAR ENDING	Admissions.....	Whole number treated...	Discharged recovered....	Discharged not recovered.....	Died.....	Escaped.....	Remaining.....	Increase.....	Decrease.....	Per cent. of recoveries to admissions.....	Per cent. of deaths to whole number treated.
Received from Western Hospital.....	122										
September 30, 1881.....	20	142	6	3	1	133	1			30.00	2.11
September 30, 1882.....	74	207	36	7	9	164	31			48.64	3.38
September 30, 1883.....	53	197	23	2	12	182	18			43.40	5.52
September 30, 1884.....	66	248	31	4	10	207	25			46.97	4.03
September 30, 1885.....	57	264	38	4	8	219	12			66.66	3.03
September 30, 1886.....	76	294	26	4	16	251	32			34.21	5.44
September 30, 1887.....	84	335	32	17	5	296	35			38.10	5.07
September 30, 1888.....	106	392	53	26	26	278	1			50.00	6.63
September 30, 1889.....	114	397	40	6	33	313	26			35.04	8.31
September 30, 1890.....	123	436	62	24	21	325	12			50.80	4.81
September 30, 1901.....	144	469	43	34	25	367	42			29.86	4.33
September 30, 1902.....	143	510	26	56	45	330	18			18.11	8.82
September 30, 1903.....	150	530	33	79	27	390	10			22.00	5.09
September 30, 1904.....	171	561	22	56	33	440	50			12.92	5.89
September 30, 1905.....	171	611	32	64	34	481	41			18.71	5.55
September 30, 1906.....	166	647	44	43	42	518	37			26.50	6.49
September 30, 1907.....	198	711	37	44	47	581	68			19.17	6.61
September 30, 1908.....	228	809	70	47	51	638	57			30.74	6.30
September 30, 1909.....	229	867	44	43	49	732	94			19.21	5.53
September 30, 1910.....	261	998	56	56	71	807	75			22.61	7.15
September 30, 1911.....	265	1,071	62	57	65	887	80			23.39	6.06
September 30, 1912.....	255	1,142	78	66	78	920	33			30.58	6.83
September 30, 1913.....	278	1,198	86	75	86	946	26			31.50	7.20
September 30, 1914.....	279	1,225	47	52	70	1,056	110			16.84	5.71
September 30, 1915.....	254	1,310	61	29	74	1,146	90			24.01	5.63
September 30, 1916.....	206	1,352	80	60	70	1,142	4			33.83	5.17
September 30, 1917.....	260	1,402	27	25	77	1,270	128			10.37	5.49
September 30, 1918.....	241	1,511	55	57	91	1,310	40			22.82	6.01



SOME PUMPKINS, EASTERN STATE HOSPITAL



Table No. 15.
SUMMARY OF POPULATION.

	Year Ending September 30, 1917			Year Ending September 30, 1918		
	Male	Female	Total	Male	Female	Total
Patients in hospital at beginning of term.....	728	340	1,068	777	376	1,153
Patients on parole and escaped.....	42	32	74	72	45	117
Grand total at beginning of term.....	770	372	1,142	849	421	1,270
Patients received on commitment during term....	156	89	245	151	83	234
Patients received from State Penitentiary.....	11	.....	11	6	.....	6
Patients received from State Reformatory.....	4	.....	4	1	.....	1
Total admissions.....	171	89	260	158	83	241
Total number of patients in hospital during term.....	899	429	1,328	935	459	1,394
Patients discharged as "recovered".....	20	8	28	31	24	55
Patients discharged as "improved".....	10	5	15	22	7	29
Patients discharged as "unimproved".....	4	6	10	17	7	24
Patients discharged as "not insane".....	2	.....	2	3	.....	3
Patients died.....	56	21	77	59	32	91
Number of vacancies created.....	92	40	132	133	68	201
Number of patients remaining at end of term.....	777	376	1,153	794	386	1,180
Number of patients on parole and escaped.....	72	45	117	83	46	129
Grand total at end of term.....	849	421	1,270	877	432	1,309

Respectfully submitted,

ALFRED S. OLIVER, Jr., Superintendent.

NORTHERN STATE HOSPITAL.

To the Honorable State Board of Control, Olympia, Wash.

Gentlemen: In accordance with the State law, I respectfully submit for your consideration a report on the Northern State Hospital for the period beginning October 1, 1916, and ending September 30, 1918, with recommendations for the next biennial period.

It has been very difficult during the past year to keep the work in and about the hospital up to the usual standard, or to make the improvements around the grounds and farm lands that we wished to make, on account of the change in conditions since the beginning of the war.

Work in this section of the State has been very plentiful and wages high, so many of the experienced attendants, who have followed their profession for years, have been drawn away from the hospital by the demand for men to fill more lucrative positions.

In addition to this, many of our most experienced men responded early to their country's call for men and volunteered their services for the army or navy. Some of them are now stationed in base hospitals; some on hospital ships, while many have been in France many months, so there has been a shortage of help for a period of more than a year.

It has been impossible to employ men to fill their places, so women have been placed on male wards where they could be so placed with safety, and they have rendered very efficient service. Many of the nurses and attendants who remained in the service have been obliged to work thirteen hours a day for months, and without a day's rest, and in most instances they have done their work cheerfully, and had it not been for these loyal nurses the care of the patients would have been a much more serious matter than it now is, and I wish to express my appreciation of their loyal support and untiring efforts in caring for the patients.

In addition to their service they have contributed liberally to all war aids, and responded promptly to the call to purchase Liberty Bonds to aid the boys overseas and the government.

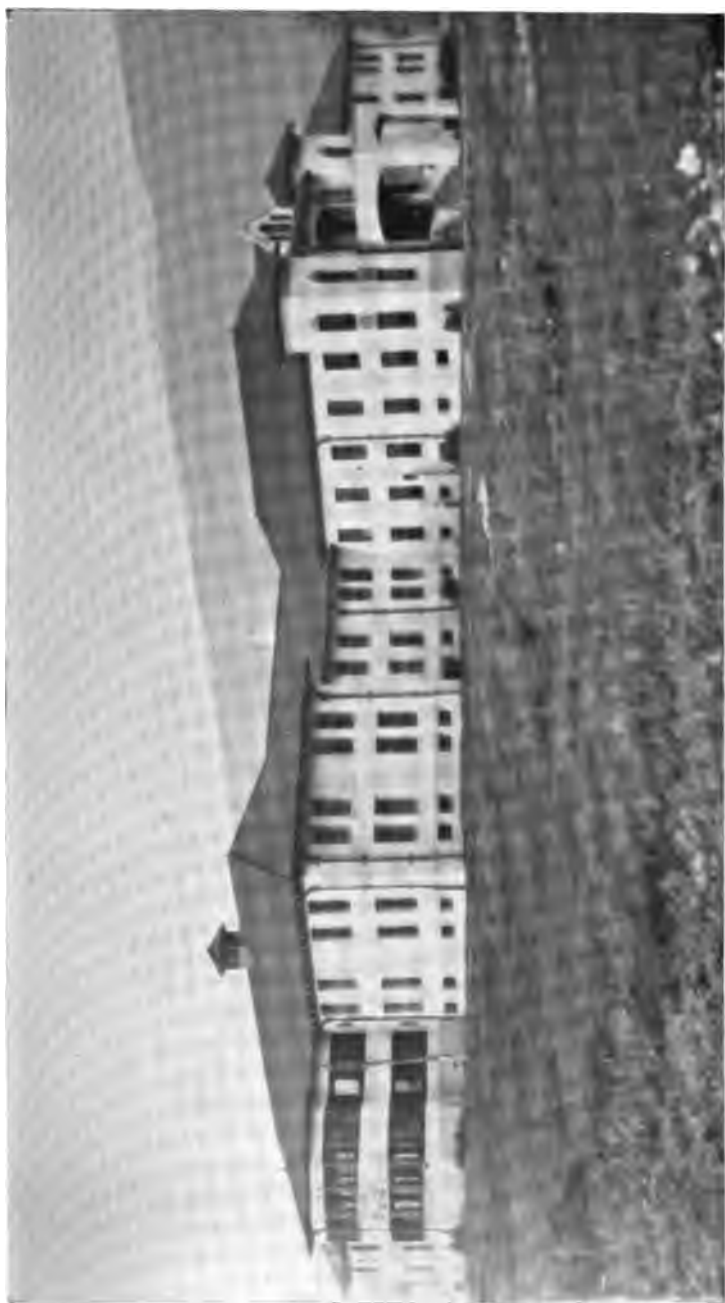
Following is a list of employees who volunteered their services, and are now either in the army or navy:

Dr. Joseph Hehir	Leslie Merrill	Ray Scott
Claude Latimer	Joe Burgess	Albert Bergauer
A. E. Christ	Harry Salin	John Jones
John Latin	A. E. Ruffe	J. M. Mackenzie
John Griswold	S. G. Scholtens	V. N. Davis
R. C. Smith		

Review of Movement of Officers—Dr. Joseph Hehir received his commission in May, 1918, and resigned to enter the service.

Dr. Edward Bollinger was called to fill the vacancy.

Review of Movement of Population—Normal capacity of the institution October 1, 1916, 620; total population October 1, 1916, 692; number of admissions during the first period, 321. There were 158 vacancies created, as follows: By discharge, 61; by death, 95. Remaining September 30, 1917, 857.



ADMINISTRATION BUILDING, NORTHERN STATE HOSPITAL.

During the second period there were admitted, 399; vacancies created, 263; by discharge, 159; by death, 104. Remaining September 30, 1918, 993.

Of the total number discharged, 46 were deported or returned to their homes in other states. In the hospital at present there are 15 alien insane for whom federal deportation warrants have been issued, but they cannot be deported at this time on account of the submarine situation.

Of the total number of deaths during the two-year period 22 were over 70 years of age, 13 over 80, and 1 at the age of 92. I regret that I have to report one case of suicide by hanging. It being the second death by suicide in this hospital since it was opened seven years ago.

Review of Improvements—For the convenience of reference I have tabulated all the improvements made during the biennium.

- Male ward building (under construction).
- Commissary building.
- Power house.
- Boiler.
- Concrete stack, 120 feet.
- Piggery.
- Green house (now under construction).
- Employees' dormitory.
- Concrete trestles to support water mains.
- Five bridges.
- Root house.
- Hay barn.
- Implement shed.
- Dredged Hansen Creek.
- Extended storm sewer system.
- Laid new water mains to main building, piggery and barns.
- Installed new laundry and shop machinery.
- Built and graded additional roads and lawn.
- Painted outside administration building and four cottages.
- Set out shrubbery and 150 additional shade trees.
- Excavated 1,030 yards of dirt, and built foundation for male ward building.
- Eighty acres of land cleared.

Appropriations were made for buildings that do not appear on the list, as we were unable to build them on account of the increased cost of all building material and labor, Twenty-eight thousand dollars was appropriated to complete the female receiving ward, but the lowest bid received was several thousand dollars in excess of the appropriation, and as a result the women's wards have been badly crowded.

No changes could be made in the plans and specifications to reduce its cost, as it was a wing to complete the building.

We did, however, succeed in having built a commissary building and power house as specified, and by making some changes in the plans and specifications of the male ward building, bringing it within the appropriation, a contract was let early in August of this year for its construction.

All buildings so far completed are satisfactory in every respect, the design, workmanship and finish being all that could be desired.

Perhaps the most important development in connection with the institution during the biennium is the improvement made in the farm. We have been able to clear eighty additional acres, forty acres of which have been

cultivated and produced crops this year. The balance is now being prepared for spring crops, and an orchard tract consisting of ten acres.

This gives a total of 273 acres now under cultivation, which should be sufficient for the needs of the institution for a number of years to come.

The marked increase in the productiveness of the soil in this section, resulting from repeated cultivation, is evidence of its value, and the State is very fortunate in having a large tract in this section.

Our crops this year, even under very unfavorable conditions, are good. The production per acre is greater than in previous years.

The dairy herd has been increased by several head, and we hope next year to be able to make a large portion, if not all, of the butter used at the institution.

During the spring and summer we have raised about 100 chickens, and we hope next year to increase this number by several hundred. If we are successful in this we expect to be able to produce all the eggs required by the entire population.

Review of Recommendations—

Male ward building.....	\$110,000 00
Female ward building.....	110,000 00
Wing to complete female receiving ward.....	50,000 00
Superintendent's cottage	10,000 00
Officers' cottage	5,000 00
Garage, blacksmith shop and oil house.....	5,000 00
Cow barn and other farm buildings.....	8,000 00
Morgue	5,000 00
Grainery	2,000 00
Machine shop equipment.....	1,100 00
Construction of roads and lawns.....	3,000 00
Wire fencing	1,000 00
Nursery stock	1,000 00
Motor truck	4,000 00
Farm machinery	2,000 00
Live stock	1,000 00
Repairs and replacements, including painting of administration building, four ward buildings (interior of) and re-modeling of four ward buildings.....	37,000 00
Household furniture for ward buildings.....	20,000 00

In making the foregoing recommendations I am not unmindful of the economic needs of the times, and the increased cost of all building material and labor, but if we are to increase the capacity of the hospital to relieve the overcrowded conditions now existing, and properly house the patients that will be committed during the next two years, these ward buildings should be provided.

The superintendent's and officers' quarters are in the administration building, and occupy rooms that are badly needed for hospital use. A cottage should be built for the superintendent's residence, with a sufficient number of rooms to provide for the State Board of Control and other visiting State officials.



WARD BUILDING, NORTHERN STATE HOSPITAL.





Our anticipated population by 1920 will be at least 1,200, and there are now only two physicians to care for them. At least two additional physicians should be added to the staff next year, and as there are no rooms available for them, I am asking for an appropriation to cover cost of a suitable building for them.

I have planned to build a garage, grainery, blacksmith shop and oil house of fire proof construction, and have asked for an appropriation to cover cost of material, the work to be done by employees and patients.

A small quantity of machinery is needed to complete the shop equipment, which will enable us to make all ordinary repairs. This is a very important matter as we are a long distance from repair shops, and with this additional machinery we will be able to make the repairs here that would otherwise cause many unnecessary delays.

We should have at least four young horses to replace some of the old horses that have been on the farm a number of years, and to assist in the farm work. The acreage is getting so extensive that the horses we now have are unable to do the work.

Many of the wards are in need of repairs. New floors must be laid in several of the side rooms, and the cement floors of all the bath rooms, and many of the entrance halls will have to be relaid.

Some changes should be made in the Four Ward Buildings to divide them into two wards in order to make a better classification of cases. In each of these buildings 110 patients of all types are housed, and the result is difficulty in management, confusion and frequent disturbance of various kinds which can not be avoided under such conditions, and is decidedly injurious to the best interest of the patients.

In addition to this all the interior walls should be painted. These have never been properly painted, and they are in very poor condition.

A great deal of shrubbery and many trees are needed for the grounds as several additional acres of lawn will be laid down in the spring. The appropriation of two years ago furnished only half the amount that was specified for the Administration Building alone, and trees for the orchard. There are eight more buildings that require some plants and shrubbery about them to improve the immediate surroundings, and add to the general appearance of the institution grounds.

The experience we have had during the past year in trying to maintain our population on the appropriations made two years ago, has demonstrated the necessity of making larger appropriations for the maintenance of this institution for the next two years.

The general condition of the market at this time is about the same as it has been during the past year or more with no indication of a decrease in prices, therefore it would seem necessary to increase the appropriation at least fifty per cent to cover cost of maintenance, and salaries and wages.

All our reserve stock of foods, supplies and clothing have become exhausted in our efforts during the second period of the biennium to keep within our appropriation, and these supplies must be replaced at greatly increased cost.

It has been necessary to increase the scale of wages during the past year in order to secure help, and further increase will have to be made on account of the advance made in wages in other states in the western section of the country.

The fact that we have been able thus far to keep within our appropriation is due largely to the assistance we have received from your Board, all of which has been highly appreciated.

Table No. 1.

	Males	Females	Total
Insane patients on books of institution at beginning of biennium.....	479	213	692
Admissions during biennium—			
First admissions.....	460	218	678
Readmissions.....	19	21	39
Total admissions.....	957	452	1,409
Transfers from other institutions for the insane.....	1	2	3
Total received during biennium.....	479	241	720
Total under treatment during biennium.....	958	454	1,412
Discharged from books during biennium—			
As recovered.....	104	38	142
As improved.....	48	18	66
As unimproved.....	3	1	4
As not insane.....	3	2	5
Transferred to other institutions for the insane.....	3		3
Died during biennium.....	145	54	199
Total discharged and died during year.....	302	117	419
Insane patients remaining on books of institution at end of biennium..	656	337	993
SUPPLEMENTARY DATA			
Average daily number of insane patients actually in institution during biennium.....	576.5	243.3	819.8
Average daily number of other insane patients on books but away from institution on parole, on visit, escaped or on temporary leave..	65	33	98

Table No. 2.

**NATIVITY OF FIRST ADMISSIONS AND OF PARENTS OF FIRST ADMISSIONS,
FOR BIENNIUM ENDING SEPTEMBER 30, 1918.**

NATIVITY	Patients			Parents of Male Patients			Parents of Female Patients		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
United States.....	190	134	324	92	105	197	81	89	170
Australia.....	3	1	4	1	1	2	1	1	2
Austria.....	12	1	13	14	13	27	5	4	9
Belgium.....	.....	3	3	1	1	2	4	4	8
Bohemia.....	2	.....	2	4	4	8	.....	.....	.....
*Canada.....	21	7	28	19	17	36	7	5	12
China.....	2	.....	2	2	2	4	.....	.....	.....
Denmark.....	2	4	6	5	2	7	3	3	6
England.....	26	3	29	34	28	62	11	10	21
Europe.....	1	.....	1	.....	.....	.....	.....	.....	.....
Finland.....	18	6	24	16	16	32	4	4	8
France.....	.....	3	3	2	.....	2	3	2	5
Germany.....	14	5	19	28	28	56	9	7	16
Greece.....	8	1	9	8	8	16	.....	.....	.....
Hawaii.....	1	.....	1	.....	.....	.....	.....	.....	.....
Holland.....	.....	.....	.....	1	.....	1	.....	.....	.....
Hungary.....	2	.....	2	8	8	6	.....	.....	.....
India.....	.....	1	1	.....	.....	.....	.....	.....	.....
Ireland.....	23	3	26	30	32	62	9	5	14
Italy.....	8	3	11	7	7	14	3	3	6
Japan.....	10	.....	10	8	9	17	.....	.....	.....
Mexico.....	1	.....	1	1	1	2	.....	.....	.....
Norway.....	28	11	39	27	27	54	13	14	27
Philippine Islands.....	1	.....	1	1	1	2	.....	.....	.....
Poland.....	3	.....	3	3	3	6	.....	.....	.....
Portugal.....	.....	.....	.....	1	1	2	.....	.....	.....
Roumania.....	1	.....	1	2	1	3	.....	.....	.....
Russia.....	14	3	17	15	16	31	3	3	6
Scotland.....	6	3	9	9	11	20	5	5	10
Spain.....	1	.....	1	1	1	2	1	.....	1
Sweden.....	43	19	62	41	43	84	21	21	42
Switzerland.....	3	.....	3	6	5	11	1	1	2
Turkey in Europe.....	.....	1	1	.....	.....	.....	1	1	2
Wales.....	1	.....	1	2	2	4	.....	.....	.....
Unascertained.....	15	6	21	76	73	149	33	36	69
Totals.....	460	218	678	460	460	920	218	218	436

* Includes Newfoundland.

Table No. 3.

**CITIZENSHIP OF FIRST ADMISSIONS, FOR THE BIENNIUM ENDING
SEPTEMBER 30, 1918.**

	Males	Females	Total
Citizens by birth.....	194	137	331
Citizens by naturalization.....	15	4	19
Aliens.....	190	31	221
Citizenship unascertained.....	61	46	107
Totals.....	460	218	678

Table No. 4.
PSYCHOSES OF FIRST ADMISSIONS, FOR THE BIENNIUM ENDING
SEPTEMBER 30, 1918.

PSYCHOSES	Males	Females	Total
TRAUMATIC PSYCHOSES.....	3	2	5
SENILE PSYCHOSES—Total.....	39	31	70
Simple deterioration.....	16	22	
Presbyophrenic type.....	1	1	
Delirious and confused states.....	8	4	
Depressed and agitated states in addition to deterioration.....	4	2	
Paranoid states in addition to deterioration.....		2	
PSYCHOSES WITH CEREBRAL ARTERIOSCLEROSIS.....	13	1	14
GENERAL PARALYSIS.....	60	3	63
PSYCHOSES WITH CEREBRAL SYPHILIS.....	10		10
PSYCHOSES WITH OTHER BRAIN OR NERVOUS DISEASES—			
Total.....	2		2
Meningitis, tuberculous or other forms.....	1		
Tubes.....	1		
ALCOHOLIC PSYCHOSES—Total.....	24	2	26
Delirium tremens.....		1	
Acute hallucinosis.....	12		
Acute paranoid type.....	1		
Korsakow's psychosis.....	1		
Chronic hallucinosis.....	1		
Chronic paranoid type.....	2		
Other types, acute or chronic.....	7	1	
PSYCHOSES DUE TO DRUGS AND OTHER EXOGENOUS			
TOXINS—Total.....	4	2	6
Opium (and derivatives), cocaine, bromides, chloral, etc., alone			
or combined.....	4	2	
PSYCHOSES WITH OTHER SOMATIC DISEASES—Total.....	2	5	7
Delirium with infectious diseases.....	1		
Post-infectious psychoses.....	1		
Cardio-renal disease.....		2	
Other diseases or conditions.....		3	
MANIC-DEPRESSIVE PSYCHOSES—Total.....	68	78	146
Manic type.....	35	36	
Depressive type.....	31	42	
Mixed type.....	2		
INVOLUTION MELANCHOLIA.....	10	3	13
DEMENTIA PRAECOX—Total.....	180	66	246
Paranoid type.....	15	15	
Katatonic type.....	9	4	
Hebephrenic type.....	76	39	
Simple type.....	30	8	
PARANOIA AND PARANOIC CONDITIONS.....	8	1	9
EPILEPTIC PSYCHOSES—Total.....	18	7	25
Deterioration.....	5		
Clouded states.....	4	2	
Other conditions.....	9	5	
PSYCHONEUROSES AND NEUROSES—Total.....		3	3
Neurasthenic type.....		3	
PSYCHOSES WITH CONSTITUTIONAL PSYCHOPATHIC			
INFERIORITY.....	5	3	8
PSYCHOSES WITH MENTAL DEFICIENCY.....	4	2	6
UNDIAGNOSED PSYCHOSES.....	6	7	13
NOT INSANE—Total.....	4	2	6
Constitutional psychopathic inferiority without psychosis.....	3		
Mental deficiency without psychosis.....	1	1	
Others.....		1	

Table No. 5.

RACE OF FIRST ADMISSIONS CLASSIFIED WITH REFERENCE TO PRINCIPAL PSYCHOSES, FOR THE BIENNIUM ENDING SEPTEMBER 30, 1918.

RAOE	Total		Traumatic			Senile			With cerebral arterio-sclerosis			General paralysis			With cerebral syphilis			With other brain or nervous diseases			Alcoholic			Due to drugs and other exogenous toxins			With other somatic diseases			
	M.	F.	T.	T.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	
Chinese.....	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
English.....	25	4	29	...	4	1	5	...	5	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Finnish.....	21	5	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
French.....	2	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
German.....	17	3	20	...	...	...	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Greek.....	9	...	9	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Hebrew.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Irish.....	20	4	24	...	2	2	4	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Italian.....	8	5	13	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Japanese.....	9	...	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Pacific Islander.....	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Romanian.....	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Scandinavian.....	81	29	110	...	1	3	6	3	3	8	3	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Scotch.....	3	3	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Slavonic.....	15	6	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Spanish.....	1	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Turkish.....	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Welsh.....	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
West Indian.....	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other specific races.....	236	148	384	2	2	4	23	46	7	1	5	38	3	41	3	3	1	1	12	2	14	4	2	6	2	5	7	...	...	
Race unascertained.....	11	6	17	...	4	1	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Totals.....	460	218	678	3	2	5	39	31	70	13	1	14	60	3	63	10	...	10	2	...	2	24	2	26	4	2	6	2	5	7

* Includes "North" and "South."

† Norwegians, Danes and Swedes.

‡ Includes Bohemian, Bosnian, Croatian, Delmatian, Herzegovinian, Montenegrin, Moravian, Polish, Russian, Ruthenian, Servian, Slovak, Slovenian.

§ Except Cuban.

Table No. 5—Continued.
 RACE OF FIRST ADMISSIONS CLASSIFIED WITH REFERENCE TO PRINCIPAL PSYCHOSES, FOR THE BIENNium
 ENDING SEPTEMBER 30, 1918.

RACE	Manic-depressive		Involution melancholia		Dementia praecox		Paranoia and paranoid conditions		Epileptic psychoses		Psycho-neuroses and neuroses		With constitutional psychopathic inferiority		With mental deficiency		Undiagnosed psychoses		Not insane	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Chinese.....	7	3	10	.....	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
English.....	3	2	5	.....	14	2	16	.....	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Finnish.....	3	2	5	.....	1	1	1	.....	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
French.....	3	2	5	.....	8	1	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
German.....	3	2	5	.....	3	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Greek.....	.....	.....	.....	.....	8	1	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hebrew.....	1	.....	1	.....	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Irish.....	2	2	4	.....	4	1	5	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Italian.....	1	.....	1	.....	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Japanese.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pacific Islander.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rumanian.....	11	11	22	5	5	30	8	47	3	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Scandinavian.....	11	11	22	5	5	30	8	47	3	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Scottish.....	1	2	3	.....	10	4	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Slavonic.....	1	2	3	.....	10	4	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Spanish.....	.....	.....	.....	.....	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turkish.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Welsh.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Indian.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Other specific races.....	36	50	86	5	3	8	79	40	119	2	1	5	12	3	15	3	8	2	4	6
Race unascertained.....	2	2	2	.....	7	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	68	78	146	10	3	13	180	66	246	8	1	9	18	7	25	3	3	5	3	8

* Includes "North" and "South."

† Norwegians, Danes and Swedes.

‡ Includes Bohemian, Bosnian, Croatian, Delmatian, Herzegovinian, Montenegrin, Moravian, Polish, Russian, Ruthenian, Servian, Slovak, Slovenian.

§ Except Cuban.

Table No. 6—Continued.

AGE OF FIRST ADMISSIONS CLASSIFIED WITH REFERENCE TO PRINCIPAL PSYCHOSES, FOR THE BIENNIMUM ENDING SEPTEMBER 30, 1918.

PSYCHOSES		45-49 years			50-54 years			55-59 years			60-64 years			65-69 years			70 years and over			Unascertained		
		M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
	Traumatic.....				1		1				1	1		1		1						
	Senile.....				1		1				5	11		10		5	15		21		17	
	With cerebral arteriosclerosis.....				1		1				5	1		6		4						
	General paralysis.....				1		1				1											
	With cerebral syphilis.....	10	10	9	9	4	4				1								1		1	
	With other brain or nervous diseases.....				1		1				1											
	Alcoholic.....	3	8	4	4	2	2															
	Due to drugs and other exogenous toxins.....																					
	With other somatic diseases.....	1															1		1			
	Manic-depressive.....	12	8	20	5	6	11	7	7	14	3	4	7				1		1			
	Involution melancholia.....	1			1		2		2	2	1											
	Dementia praecox.....	16	5	21	7	2	9	7	1	8	2	1	3									
	Paranoia or paranoid conditions.....						1															
	Epileptic psychoses.....	3	8	6	1		2		2		1		1									
	Psychoneuroses and neuroses.....				1		1															
	With constitutional psychopathic inferiority.....																					
	With mental deficiency.....		1	1	2		2															
	Undiagnosed psychoses.....		1	1																		
	Not insane.....																					
	Totals.....	46	18	64	35	10	45	28	14	42	18	13	31	17	6	23	26	17	43	1		1

Table No. 7.

**DEGREE OF EDUCATION OF FIRST ADMISSIONS CLASSIFIED WITH REFERENCE TO PRINCIPAL PSYCHOSES, FOR THE
BIENNIUM ENDING SEPTEMBER 30, 1918.**

PSYCHOSES	Total			Illiterate			Reads and writes			Common School			High school			College			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Traumatic.....	3	2	5							3		3									
Senile.....	39	31	70	5						19	19	38	2	3	5				1	13	2
With cerebral arteriosclerosis.....	13	1	14		5					7	7	14	2	1	3		1		4		8
General paralysis.....	60	3	63	3						42	1	43	6	1	7		1		9		4
With cerebral syphilis.....	10		10							5		5	2		2				3		3
With Huntington's chorea.....										2		2									
With other brain or nervous diseases.....	2		2																		
Alcoholic.....	24	2	26	2						13		13	2	2	4						
Due to drugs and other exogenous toxins.....	4	2	6	1						1	2	3							6		6
With other somatic diseases.....	2	5	7							1		1				1			1		1
Manic-depressive.....	68	78	146	2	2	4	1	2	3	50	56	106	3	9	12	3	1	4	10	9	19
Involution melancholia.....	10	3	13							3	5	8									
Dementia praecox.....	180	66	246	12	2	14				112	41	153	15	17	32		1	1	38	7	46
Paranoia or paranoid conditions.....	8	1	9							5	1	6							2		2
Epileptic psychoses.....	18	7	25	1	1	2				11	5	16	1		1				5	1	6
Psychoneuroses and neuroses.....	3	3	6							3	3	6									
With constitutional psychopathic inferiority.....	5	3	8	1	1	2				3	1	4							1	1	2
With mental deficiency.....	4	2	6	1	1	2				2	1	3							1	1	2
Undiagnosed psychoses.....	6	7	13	1						4	3	7		1	2				1	2	3
Not insane.....	4	2	6							1	1	2							1		1
Totals.....	460	218	678	30	7	37	4	3	7	295	140	425	36	35	71	4	4	8	97	36	133

Table No. 8.

**ENVIRONMENT OF FIRST ADMISSIONS CLASSIFIED WITH REFERENCE TO
PRINCIPAL PSYCHOSES, FOR THE BIENNIUM ENDING
SEPTEMBER 30, 1918.**

PSYCHOSES	Total			Urban			Rural			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Traumatic.....	3	2	5	2	1	3	1	1	2	.....	.....	.....
Senile.....	39	31	70	23	27	50	12	5	17	2	1	3
With cerebral arteriosclerosis.....	13	1	14	11	1	12	1	.....	1	1	.....	1
General paralysis.....	60	3	63	52	3	55	8	.....	8	.....	.....	.....
With cerebral syphilis.....	10	.....	10	7	3	10	.....	.....	.....	.....	.....	.....
With other brain or nervous diseases.....	2	.....	2	1	.....	1	1	.....	1	.....	.....	.....
Alcoholic.....	24	2	26	17	2	19	7	.....	7	.....	.....	.....
Due to drugs and other exogenous toxins.....	4	2	6	4	2	6	.....	.....	.....	.....	.....	.....
With other somatic diseases.....	2	5	7	1	4	5	1	1	2	.....	.....	.....
Manic-depressive.....	68	78	146	45	71	116	12	10	22	3	5	8
Involution melancholia.....	10	3	13	10	3	13	.....	.....	.....	.....	.....	.....
Dementia praecox.....	180	66	246	120	48	168	66	10	76	.....	2	2
Paranoia or paranoic conditions.....	8	1	9	6	1	7	2	.....	2	.....	.....	.....
Epileptic psychoses.....	18	7	25	13	7	20	5	.....	5	.....	.....	.....
Psychoneuroses and neuroses.....	.....	3	3	.....	3	3	.....	.....	.....	.....	.....	.....
With constitutional psychopathic inferiority.....	5	3	8	4	1	5	1	2	3	.....	.....	.....
With mental deficiency.....	4	2	6	4	2	6	.....	.....	.....	.....	.....	.....
Undiagnosed psychoses.....	6	7	13	4	4	8	.....	1	1	2	2	4
Not insane.....	4	2	6	3	2	5	1	.....	1	.....	.....	.....
Totals.....	460	218	678	327	185	512	118	80	148	8	10	18

Table No. 9.

**USE OF ALCOHOL BY FIRST ADMISSIONS CLASSIFIED WITH REFERENCE
TO PRINCIPAL PSYCHOSES, FOR THE BIENNIUM
ENDING SEPTEMBER 30, 1918.**

PSYCHOSES	Total			Abstinent			Temperate			Intemperate			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Traumatic.....	3	2	5	.....	2	2	2	.....	2	.....	.....	.....	1	.....	1
Senile.....	39	31	70	30	28	58	5	1	6	2	.....	2	2	2	4
With cerebral arteriosclerosis.....	13	1	14	7	.....	7	3	.....	3	1	.....	1	2	1	3
General paralysis.....	60	3	63	25	2	27	10	1	11	13	.....	13	12	.....	12
With cerebral syphilis.....	10	.....	10	3	.....	3	3	.....	3	1	.....	1	3	.....	3
With other brain or nervous diseases.....	2	.....	2	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....
Alcoholic.....	24	2	26	.....	.....	.....	.....	.....	.....	24	2	26	.....	.....	.....
Due to drugs and other exogenous toxins.....	4	2	6	3	1	4	1	.....	1	1	.....	1	.....	.....	.....
With other somatic diseases.....	2	5	7	1	4	5	1	.....	1	.....	.....	.....	1	1	.....
Manic-depressive.....	68	78	146	41	48	89	10	1	11	11	2	13	6	27	33
Involution melancholia.....	10	3	13	8	2	10	.....	1	1	.....	.....	.....	1	1	2
Dementia praecox.....	180	66	246	72	40	112	52	4	56	18	2	20	33	20	53
Paranoia or paranoic conditions.....	8	1	9	8	1	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Epileptic psychoses.....	18	7	25	9	5	14	2	2	4	1	.....	1	6	.....	6
Psychoneuroses and neuroses.....	.....	3	3	.....	2	2	.....	.....	.....	.....	.....	.....	1	1	.....
With constitutional psychopathic inferiority.....	5	3	8	4	3	7	1	.....	1	.....	.....	.....	.....	.....	.....
With mental deficiency.....	4	2	6	4	2	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Undiagnosed psychoses.....	6	7	13	4	4	8	.....	.....	.....	.....	.....	.....	2	8	5
Not insane.....	4	2	6	2	.....	2	2	.....	2	.....	.....	.....	2	.....	2
Totals.....	460	218	678	221	144	365	94	10	104	72	6	78	75	56	131

Table No. 10.

**MARITAL CONDITION OF FIRST ADMISSIONS CLASSIFIED WITH REFERENCE TO PRINCIPAL PSYCHOSES, FOR THE
BIENNIUM ENDING SEPTEMBER 30, 1918.**

PSYCHOSES	Total		Single			Married			Widowed			Separated			Divorced			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.
Traumatic.....	3	2	5	1	1	2	2	2	4	1	1	1	1	1	1	1	1	1	1	1
Senile.....	30	31	70	10	2	12	15	15	30	8	10	18	1	1	1	1	1	1	1	1
With cerebral arteriosclerosis.....	13	1	14	2	2	4	5	1	6	8	3	3	1	1	1	1	1	1	1	1
General paralysis.....	60	3	63	25	1	27	26	2	28	3	3	3	1	1	1	1	1	1	1	1
With cerebral syphilis.....	10	10	20	5	5	10	3	3	6	3	3	3	1	1	1	1	1	1	1	1
With other brain or nervous diseases.....	2	2	4	2	2	4	2	2	4	2	2	2	1	1	1	1	1	1	1	1
Alcoholic.....	24	2	26	8	8	16	5	2	7	2	2	2	1	1	1	1	1	1	1	1
Due to drugs and other exogenous toxins.....	4	2	6	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1
With other somatic diseases.....	2	5	7	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1
Manic-depressive.....	68	78	146	37	6	43	20	55	75	3	8	11	1	1	1	1	1	1	1	1
Involution melancholia.....	10	3	13	2	1	3	5	2	7	1	1	1	1	1	1	1	1	1	1	1
Dementia praecox.....	180	66	246	137	29	166	30	28	58	4	6	10	1	1	1	1	1	1	1	1
Paranoia or paranoid conditions.....	8	1	9	7	3	10	7	1	8	2	2	2	1	1	1	1	1	1	1	1
Epileptic psychoses.....	18	7	25	9	3	12	7	2	9	1	1	1	1	1	1	1	1	1	1	1
Psychoneuroses and neuroses.....	18	3	21	9	3	12	7	2	9	1	1	1	1	1	1	1	1	1	1	1
With constitutional psychopathic inferiority.....	5	3	8	3	2	5	1	1	2	1	1	1	1	1	1	1	1	1	1	1
With mental deficiency.....	4	2	6	3	2	5	2	2	4	1	1	1	1	1	1	1	1	1	1	1
Undiagnosed psychoses.....	6	7	13	2	3	5	2	2	4	1	1	1	1	1	1	1	1	1	1	1
Not Insane.....	4	2	6	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1
Totals.....	460	218	678	257	53	310	25	118	243	24	29	53	3	3	4	5	9	45	15	60

Table No. 11.

**PSYCHOSES OF READMISSIONS, FOR THE BIENNIUM ENDING
SEPTEMBER 30, 1918.**

PSYCHOSES	Male	Female	Total
TRAUMATIC PSYCHOSES.....	2	.....	2
SENILE PSYCHOSES—Total.....	1	1	2
Simple deterioration.....	1	1	.....
GENERAL PARALYSIS.....	2	1	3
PSYCHOSES DUE TO DRUGS AND OTHER EXOGENOUS TOXINS—			
Total.....		1	1
Opium (and derivatives), cocaine, bromides, chloral, etc., alone or combined.....		1	.....
MANIC-DEPRESSIVE PSYCHOSES—Total.....	5	9	14
Manic type.....	2	4	.....
Depressive type.....	3	5	.....
INVOLUTION MELANCHOLIA.....	1	.....	1
DEMENTIA PRAECOX—Total.....	7	5	12
Paranoid type.....	1	.....	.....
Katatonic type.....	.....	1	.....
Hebephrenic type.....	4	4	.....
Simple type.....	1	.....	.....
PARANOIA AND PARANOIC CONDITIONS.....	1	.....	1
EPILEPTIC PSYCHOSES—Total.....	.....	1	1
PSYCHOSES WITH CONSTITUTIONAL PSYCHOPATHIC INFERIORITY.....	2	.....	2

Table No. 12.

**DISCHARGES OF PATIENTS CLASSIFIED WITH REFERENCE TO PRINCIPAL
PSYCHOSES AND CONDITIONS ON DISCHARGE, FOR THE
BIENNIUM ENDING SEPTEMBER 30, 1918.**

PSYCHOSES	Total			Recovered			Improved			Unimproved			Not Insane		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Traumatic.....	1		1	1		1									
Senile.....	4	1	5	3		3	1	1	2						
General paralysis.....	4		4				4		4						
With other brain or nervous diseases.....		1	1		1	1									
Alcoholic.....	13	2	15	12	2	14	1		1						
Due to drugs and other exogenous toxins.....	2		2	2		2									
With other somatic diseases.....	2		2				2		2						
Manic-depressive.....	42	25	67	26	17	43	16	7	23		1	1			
Involution melancholia.....	2		2	2		2									
Dementia praecox.....	82	25	107	53	18	71	26	7	33	8		3			
Paranoia or paranoid conditions.....	1		1	1		1									
Epileptic psychoses.....	4		4	3		3	1		1						
With constitutional psychopathic inferiority.....	1	3	4	1		1		3	3						
Not insane.....	3	2	5										3	2	5
Totals.....	161	59	220	104	38	142	51	18	69	8	1	4	3	2	5

Table No. 13.

CAUSES OF DEATH OF PATIENTS CLASSIFIED WITH REFERENCE TO PRINCIPAL PSYCHOSES, FOR THE BIENNIUM
ENDING SEPTEMBER 30, 1918.

CAUSES OF DEATH	Total		Senile		With cerebral arterio-sclerosis		General paralysis		Manic-depressive		Involution melancholia		Dementia præcox		Epileptic psychoses		With mental deficiency		All other psychoses			
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	
GENERAL DISEASES—																						
Erysipelas.....		1	1																			
Septicæmia.....	1									1		1										
Tuberculosis of lungs.....	13	4	17							3	1	4		3	3	10		10				
Cancer.....	1									1												
NERVOUS SYSTEM—																						
Disease of spinal cord.....		2	2													1	1			1	1	
Apoplexy (cerebral hemorrhage).....	7	5	12	5	2	7	1	2	3					1	1	1						
General paralysis of insane.....	54	5	59					53	5	58												
Cerebro-spinal syphilis.....	2	1	3							1						2		2				
Exhaustion from other mental diseases.....	20	19	39	5	8	13		1	1		11	8	19		1	1	2	1	3	1	1	
Brain tumor.....		1	1																			
Epilepsy.....	6	1	7													6	1	7				
Chorea.....		1	1													1	1					
Other diseases of nervous system.....	3		3																3		3	
CIRCULATORY SYSTEM—																						
Chronic myocarditis.....	2	3	5																			
Arteriosclerosis.....	10	3	13	6	1	7	2	2	4							1	1	2			2	
Other diseases of the arteries.....	2		2																			
Other diseases of circulatory system.....	5	1	6	5	1	6												1				
RESPIRATORY SYSTEM—																						
Broncho pneumonia.....	2		2	1																		
Lobar pneumonia.....	1	2	3																			

Table No. 13—Continued.

CAUSES OF DEATH OF PATIENTS CLASSIFIED WITH REFERENCE TO PRINCIPAL PSYCHOSES, FOR THE BIENNIUM
ENDING SEPTEMBER 30, 1918.

CAUSES OF DEATH	Total			Senile			With cerebral arterio-sclerosis			General paralysis			Manic-depressive			Involution melancholia			Dementia præcox			Epileptic psychoses			With mental deficiency			All other psychoses			
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	
DIGESTIVE SYSTEM— Diseases of intestines..... Cirrhosis of liver.....	3 1	3 1	6 2																												
GENITO-URINARY SYSTEM— Chronic nephritis.....	6	6	12	3	3	6	1																								
DISEASES OF THE SKIN— Gangrene.....	1	1	2	1	1	2																									
VIOLENCE— Suicide..... Other external violence.....	3 2	2 2	5 4																												
Anemia pernicious.....		2	2																												
Totals.....	146	53	199	27	18	45	6	5	11	53	5	58	23	12	35	2	7	9	15	5	20	10	2	12	2	2	3	4	7		

Table No. 14.
AGE OF PATIENTS AT TIME OF DEATH CLASSIFIED WITH REFERENCE TO PRINCIPAL PSYCHOSES, FOR THE
BIENNIUM ENDING SEPTEMBER 30, 1918.

PSYCHOSES	Total		15—19 years			20—24 years			25—29 years			30—34 years			35—39 years			40—44 years		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.		
Traumatic.....	1		1																	
Senile.....	31	95	46																	
With cerebral arteriosclerosis.....																				
General paralysis.....	52	3	55	1	2	2							5	1	6	7	1	8		
With cerebral syphilis.....	1	1	2																	
With Huntington's chorea.....		1	1																	
Alcoholic.....	4	2	6																	
Due to drugs and other exogenous toxins.....		1	1																	
Manic-depressive.....	12	16	28	2	1	1	2	2	4	2	7	9	2	2	4	2	2	2		
Involution melancholia.....	2	4	6																	
Dementia praecox.....	23	5	28	1	1	1	6	6	1	1	2	1	1	1	2	2	2	2		
Paranoia or paranoid conditions.....	1	1	2																	
Epileptic psychoses.....	4	2	6		1	1														
With constitutional psychopathic inferiority.....	8	1	4	1		1		1	1	1	2	2								
Undiagnosed psychoses.....	11	1	12			2		1	1	1	1	1								
Totals.....	145	54	199	5	6	6	9	4	13	11	11	22	12	7	19	23	2	24		

Table No. 14—Continued.
AGE OF PATIENTS AT TIME OF DEATH CLASSIFIED WITH REFERENCE TO PRINCIPAL PSYCHOSES, FOR THE BIENNium ENDING SEPTEMBER 30, 1918.

PSYCHOSES	45—49 years			50—54 years			55—59 years			60—64 years			65—69 years			70 years and over			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Traumatic.....																					
Senile.....	1		1			1															
With cerebral arteriosclerosis.....							2	1	3	1	3	4	3	1	4	21	12	33	1		1
General paralysis.....	9		9	8	1	9	3		8	1	1	1									
With cerebral syphilis.....																					
With Huntington's chorea.....																					
Alcoholism.....				1		1	1	1	1												
Due to drugs and other exogenous toxins.....																					
Manic-depressive.....	1	1	2	1	1	1	1	1	2	2	1	3	1		1	1					
Involution melancholia.....																					
Dementia praecox.....	2		2	1	1	2	3		3	2	1	3	1		1	1	1	2	1	3	
Paranoia or paranoid conditions.....																					
Epileptic psychoses.....							2		2												
With constitutional psychopathic inferiority.....																2		2	3		3
Undiagnosed psychoses.....																					
Totals.....	13	2	15	13	4	17	12	3	15	5	7	12	4	1	5	25	14	39	6	1	7

Table No. 15.

TOTAL DURATION OF HOSPITAL LIFE OF PATIENTS DYING IN HOSPITAL CLASSIFIED ACCORDING TO PRINCIPAL PSYCHOSES, FOR THE BIENNIUM ENDING SEPTEMBER 30, 1918.

PSYCHOSES	Total			Less than 1 month			1-3 months			4-7 months			8-12 months			1-2 years			3-4 years			5-6 years			7-8 years		
	M. F. T.			M. F. T.			M. F. T.			M. F. T.			M. F. T.			M. F. T.			M. F. T.			M. F. T.			M. F. T.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Traumatic.....	1		1																								
Senile.....	31	15	46	6	2	8	3	2	5	1		1															
With cerebral arteriosclerosis.....				1	1	1				4	9	4	3	7	4	2	6	5	1	6	2	1	3	2			2
General paralysis.....	52	3	55	6	1	7	6	1	7	10	1	11	10	10	17	17	3		3								
With cerebral syphilis.....	1	1	2													1	1	2									
With Huntington's chorea.....	1	1	2																								
Alcohol.....	4	2	6										1	1	2	3	1	4				1	1				
Due to drugs and other exogenous toxins.....		1	1									1	1														
Manic-depressive.....	12	16	28	3	6	9	1	3	4	1	2	3	2	1	3	3	1	4		2	3	5					
Involution melancholia.....	2	4	6				1	1	1	1	1									2	2	4					
Dementia praecox.....	23	5	28	1		1	2	2	2	1	3	2	1	3	2	2	8	1	9	5	5	3					3
Paranoia or paranoid conditions.....	1	1	2							1	1	1															
Epileptic psychoses.....	4	2	6	1	1	2							1		1	1	1	2		1	1	2					
With constitutional psychopathic inferiority.....	3	1	4																								
Undiagnosed psychoses.....	11	1	12	2			2	1	1	2	2					2			2	1	3	1	3	1			1
Totals.....	146	54	199	19	12	31	11	11	23	22	9	31	20	6	26	33	5	28	23	9	32	11	2	13	6		6





BIRD'S EYE VIEW, STATE CUSTODIAL SCHOOL

STATE CUSTODIAL SCHOOL.

Medical Lake, Wash., September 30, 1918.

Honorable State Board of Control,
Olympia, Washington.

Gentlemen:—

As provided by the statutes, I have the honor to herewith submit the report of this institution for the term commencing October 1, 1916 and ending September 30, 1918.

The following is the movement of population for the two years:

	Male	Female	Total
Present October 1, 1916.....	296	243	539
Admitted Oct. 1, 1916, to Sept. 30, 1918..	107	99	206
Readmitted	30	29	59
Total enrollment	433	371	804
Discharged	72	64	136
Died	20	24	44
Eloped	4	....	4
Total vacancies created.....	96	88	184
Present September 30, 1918	337	283	620
	433	371	804

A large proportion of the discharges and re-admissions shown above represent those who go home for short vacations and return again.

We had 539 inmates at the beginning of the period—296 males and 243 females. There have been admitted and re-admitted, 137 males and 128 females, making a total enrollment for the period of 804. There were 184 vacancies created, leaving present at this date: 337 males and 283 females, a total of 620, being an increase of 81 for the period. The increase would have been much larger had we more accommodations, as there are now 120 on the waiting list awaiting admission.

FINANCIAL.

At the close of the last biennium, Sept. 30, 1916, the unexpended balance for maintenance for the fiscal period ending March 31, 1917, was:

	\$78,289 74
Expended from this from October 1, 1916, to March 31, 1917.....	61,694 42
Leaving an unexpended balance which lapsed to the State of.....	\$16,595 32
The balance in the building fund was.....	\$66,655 57
Of which there was expended.....	66,655 44
Leaving an unexpended balance of.....	\$0 13

The following are the appropriations made by the Legislative Assembly of 1917 and the expenditures made therefrom to this date:

Salaries and wages, April 1, 1917, to March 31, 1919	\$95,506 00
Expended to September 30, 1918.....	58,688 77
Balance available to March 31, 1919.....	\$36,816 23

I estimate that the salary list for the next six months will approximate \$21,000.00, which will leave about \$15,000.00 unexpended of this account. The amount asked for was not excessive, but as we were unable to build the two new wings, it made a difference of eight additional employees that would have been required. The scarcity of help has also compelled us to run short of employees most of the time in all our departments.

Supplies, material and service, April 1, 1917, to March 31, 1919.....	\$166,115 00
Expended to September 30, 1918.....	111,871 92
Balance available to March 31, 1919.....	\$54,243 08

We will be able to get through the next six months on the balance remaining in this appropriation, notwithstanding the tremendous increase in the cost of supplies of every description. The reason is that the appropriation was based upon an estimated daily average attendance of 670, whereas it has been but 595.22, owing to the new cottages not being built and occupied as expected. We are also getting more produce from our farm and have cut our expenditures to the lowest possible limit.

Repairs and replacements.....	\$6,800 00
Expended to September 30, 1918.....	5,995 20
Balance available to March 31, 1919.....	\$804 80

This amount will be expended during the next six months.

Two annexes to Custodial buildings.....	\$80,000 00
Expended to September 30, 1918.....	2,232 00
Balance available to March 31, 1919.....	\$77,768 00

The lowest bid received for the construction of these two buildings was \$175,000.00, so they were not built. The amount expended was for plans, specifications and advertising. The balance will revert to the State Treasury March 31, 1919.

Furniture, equipment for kitchen, bakery, dining rooms, library and entertainment..	\$4,350 00
Expended to September 30, 1918.....	3,515 68
Balance available to March 31, 1919.....	\$1,035 32

This balance will be expended during the next six months.

Piggery and poultry houses, dairy barn and two silos, walks, roads and grounds.....	\$15,000 00
Expended to September 30, 1918.....	14,041 12
Balance available to March 31, 1919.....	\$958 88

This balance will be expended during the next six months.

Shop, cold storage building and plant.....	\$10,500 00
Expended to date.....	10,490 92

Balance available to March 31, 1919.....	\$9 08
--	--------

This balance will be expended.

Filter bed	\$700 00
Nothing expended from this fund to date and it is doubtful whether we can complete this before March 31, 1919.	
Pipe and fittings to connect buildings with central heating plant, materials for north tunnel and laterals, coal bunkers and material for window screens.....	\$10,000 00
Expended to date.....	7,757 09

Balance available to March 31, 1919.....	\$2,242 91
--	------------

This balance will be expended.

Shop machinery, four sewing machines, two machine motors, farm implements, motor truck	\$4,370 00
Expended to date.....	3,660 23

Balance available to March 31, 1919.....	\$709 77
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This balance will likely be expended.

The average daily attendance for the period has been 595.22 and the daily per capita cost for maintenance has been 54 and 19-100 cents, which is but 1 and 19-100 cents above the estimate made two years ago.

The past biennium has been a busy and eventful period in the history of the institution and notwithstanding the scarcity of help and the great rise in prices of all commodities, a great deal has been accomplished and we are going to be able to get through the fiscal term within the appropriations made two years ago.

On February 5, 1917, we commenced moving the girls, offices and all movable effects from the old school to the new buildings here and completed this task in four days. The old buildings and appurtenances were soon afterward turned over to the Eastern State Hospital.

We moved 250 inmates and the regular force of employees to the new school and it was not long before our new quarters were filled and a waiting list again established.

It is a matter of regret that we were unable to erect the two new wings to the custodial buildings. These buildings were particularly designed to provide for the care of the defective delinquents. We are getting quite a number of this class now and they are quite a problem to manage, unless segregated from the others in separate quarters. We had also provided an infirmary ward in each of these buildings, which were very much needed in order that the sick might have better care and attention.

An unusually large number of improvements have been made. Soon after the appropriations became available, it became evident that owing to the rapid increase in the cost of labor and materials, it would be impossible to construct any of the proposed buildings and other work, for the sums appropriated. But we were fortunate in securing the services of Mr. D. A. McAl-

lister, who was formerly Superintendent of Construction on all the buildings previously erected here. He not only has good technical knowledge of all kinds of construction work, but is not afraid or ashamed to get in and work himself, besides laying out and directing the same. So, under his direction and with the loyal and hearty co-operation of our regular force and the boys, most of the work designed will be completed, with the exception of the two wings to the Custodial Buildings.

The sewer leading to West Medical Lake was completed Oct. 5, 1917. This was a heavy piece of work, much of it being from eight to ten feet deep and in rock. It is about 6,400 feet long. It runs on the low gradient of $2\frac{1}{2}$ inches to the hundred feet, but so far has worked very successfully, although we have no flush tank attached yet.

A number of new beds and other furniture for the cottages and furniture for the administration building and dining rooms were purchased, which adds greatly to the comfort of the inmates, employees and officers.

Three hog houses and six chicken houses were built, also several hundred feet of chicken fence.

I think we have built one of the finest dairy barns in the state. It is 40 x 164 ft. The first floor is 9 feet high with solid concrete walls 18 inches thick. Concrete mangers with concrete divisions, cement floor, stalls paved with creosoted wood blocks, 60 steel stalls with patent adjustable stanchions, 1 steel bull pen, 2 steel maternity cow pens and 1 calf pen, all with drain gutters. There is also a large milk room and a feed room on the first floor. Litter carriers running on an overhead track. The floor of the hay loft overhead is of $1\frac{1}{2}$ x 6 T. & G. flooring and first floor is ceiled overhead. There are numerous fresh air ducts controlled by registers and large foul air ducts leading from the floor to the cupolas on the roof. The hayloft holds about 200 tons of hay and large feed bins on the upper floor will carry about a carload of feed. A track for a hay carrier runs along the ridgepole.

The barn occupies a commanding location on a rock ridge about 1,700 feet from the institution proper, with excellent drainage from all sides. It is designed next year to move all the stock and poultry adjacent to the barn, it being an ideal location, with good drainage, large groves of pine trees for shade and close to the water supply pipe line.

Two silos are also incorporated in the barn, each 14 feet in diameter and 38 feet high, each having an estimated capacity of 128 tons of silage. These silos are built of hollow glazed tile, grooved to carry steel reinforcing rods. Patent silo doors opening into a tile chute are provided and the openings are inside the barn. The barn is complete with the exception of the permanent water supply, electric lighting and some inside painting. The water can be put in as soon as a fitting ordered four months ago arrives.

2,062 linear feet of cement walks $4\frac{1}{2}$ feet wide have been built and a large service cement platform 30 x 34 at the kitchen door and one 33 x 70 in front of the cold storage have been built. Also about 2,000 feet of parking and roadway curb has been built of cement. Additional walks are now being constructed as the weather permits.

A large amount of grading has been done and there are several years' work in view along this line.

An underground conduit of concrete $3\frac{1}{2}$ x 4 feet inside and 850 feet in length has been built from the base of the hill in the rear, across the

grounds, emptying across the county road in front of the administration building. This was necessary to take care of the surface water that comes down from the hills during freshets and washed out our pipe lines and fills. Here again we encountered considerable rock in excavating.

The new shop is of brick, 24 x 54 in size and 19 feet high. It contains a blacksmith and repair shop. There is a gallery running around three sides of the interior, affording space where supplies and other articles may be kept out of the way.

The new cold storage building is immediately in the rear of the kitchen and dining rooms and is a one-story structure 42 x 69. It is of brick lined with hollow tile. There are four refrigerating rooms opening off a corridor, each 12 x 16. The walls are lined with 4-inch hollow tile, 4 inches of compressed cork and $\frac{3}{4}$ inch of cement. Floors and ceiling with compressed cork, tarred paper and cement. All have floor drains, electric lights, ice box doors and steel racks and shelves. The temperature of these rooms can be run down to 14 degrees Far. if desired. The compressor room is 24x40 and contains one 8-ton compressor and refrigerating equipment, with complete brine and ice making system. The compressor is operated by a 15 H. P. motor and the brine pump and agitator by a 5 H. P. motor. Two of the refrigerating rooms are piped and in operation and openings have been left in the brine mains for connecting the other two when required. The cost of the shop, cold storage, refrigerating and ice making equipment was but \$10,500.00.

A large coal bunker 25 x 104 feet has been built in the rear of the power house. The walls are of concrete 2 feet thick at the base and tapering to 14 inches at the top and is 14 feet high, with a wood roof. A bar of 40-lb. railroad iron is bedded in the concrete every 8 feet and these are tied together with a $\frac{3}{4}$ -inch iron rod and turnbuckles. This bunker holds nearly 800 tons of coal.

A 3-barrel capacity breadmixer has been installed in the bakery and a kitchen machine and mixer in the kitchen. Aluminum dishes have been provided for all the inmates' dining rooms.

A large amount of rock has been broken up, hauled off and is being used as the base for some of the permanent roads.

About 1,300 feet of concrete tunnels are now nearing completion; 850 feet of this is $6\frac{1}{2} \times 6\frac{1}{2}$ feet and 500 feet is $5 \times 5\frac{1}{2}$ feet. These tunnels are designed to carry all the steam mains, returns, hot water pipes and wires from the power house to each of the buildings on the boys' side. As other buildings are erected in the future, connections can be made to the mains in the tunnels at small expense and with very little damage to the grounds and roadways. Much of the excavation for this tunnel was through rock. This work is being installed at the remarkably low cost of about \$2.25 per linear foot, complete and including excavation. The boys and some of our employees are entitled to great credit for the hard work they have done on this long network of tunnels. Two years ago about 1,000 feet of these tunnels were completed on the girls' side and the work we are now doing completes the system and will allow us next year to go ahead with the park and roadway system.

Owing to the great increase in the cost of pipe and fittings, we were unable to purchase sufficient to connect up all the north division with the

central heating plant, but have enough steam mains and returns to connect with the boys' school building and hot water pipes to connect all the buildings and covering for the same.

We have been unable up to this time to build the filter bed at West Medical Lake, for which an appropriation of \$700.00 was allowed, but may possibly be able to do this before March 31st next.

A great deal of work has been done on the county road between here and Medical Lake and much remains yet to be done to keep it in passable condition.

A woodworking machine has been placed in the shop and we also hope to get a lathe for repair work.

A 3½-ton Garford truck was purchased and has been indispensable in transporting our coal and supplies. We also purchased a Fordson tractor for farm work. This does good work but gets out of repair and adjustment easily, causing much loss of time when badly needed. We also bought a combined silage and feed cutter, with 40 feet of elevator pipe, which we have operated with our Ford automobile as the motive power.

FARM AND GARDEN.

This is beyond doubt the most important adjunct of an institution of this character, both as a means of occupation for the inmates and from an economical standpoint. There are great possibilities along this line. They are better fitted for this kind of work than any other and it is an occupation that seems to appeal to them. For the contentment of our inmates we must have a reasonable amount of employment at something which interests them. While we have but very few that can be trusted with responsible duties, yet, under direction, with the large number we have who can be thus employed, a great deal can be accomplished.

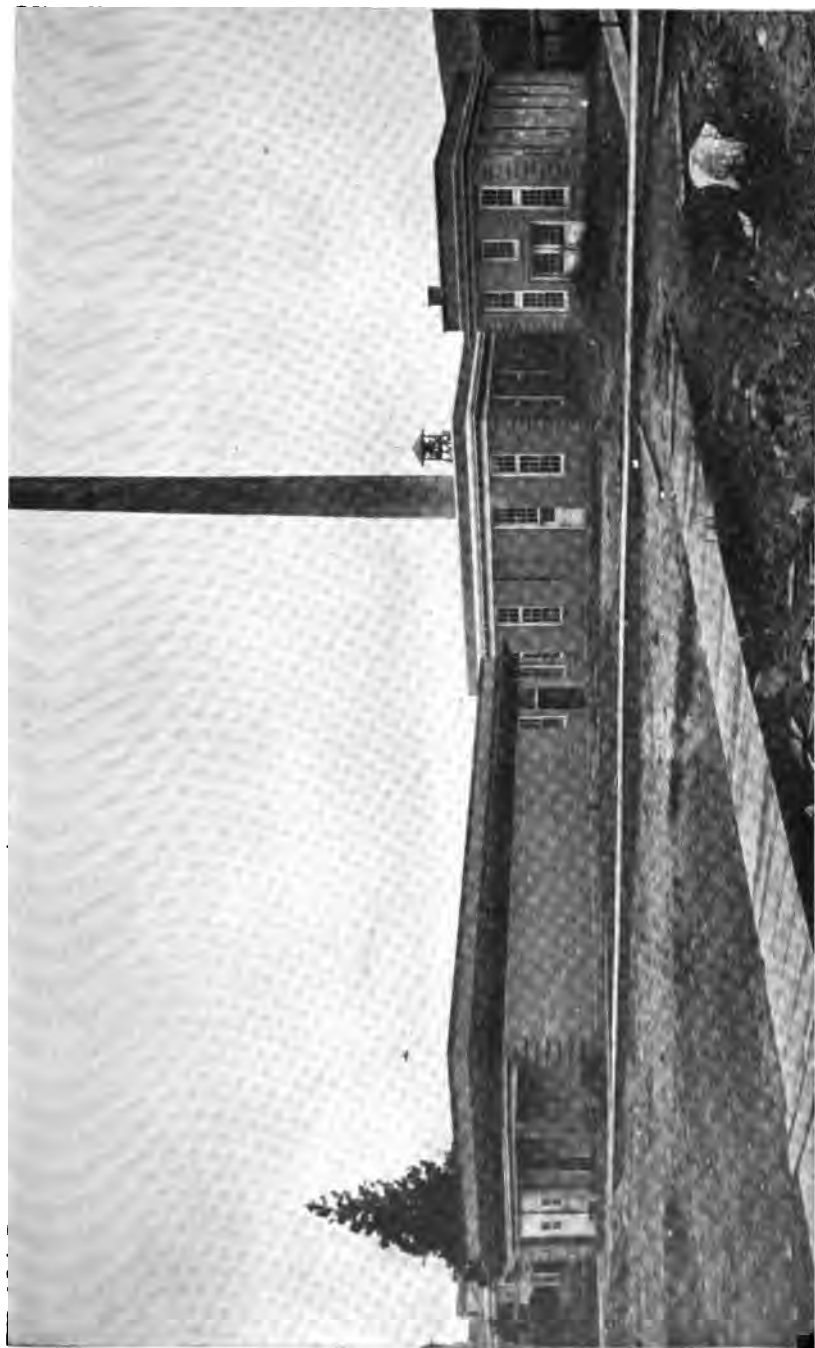
Our farm lands, which we only came into possession of about five years ago, had been practically abandoned and largely given over to weeds and some of it was pretty well covered with rocks and bowlders. By constant cultivation we have got the best of the weeds, have broken up and carted off much of the rocks, so that now we have over 400 acres under cultivation.

The past two years have been extremely dry. But by hard work we have succeeded in raising nearly all the vegetables we need for our own use.

As will be seen by the farm report hereto attached, this industry is beginning to make a very favorable showing, the value of the products for the past two years being over \$26,000.00.

We are now getting our dairy established and before long should be producing all the milk required for our use. As we have a large number of inmates who cannot masticate solid food and also have many young children, we use a large amount of milk. Last winter our milk cost us almost \$1,000.00 per month. Even if we have to buy part of our feed, I think we can save on this item about \$500.00 per month at least.

I think though, that eventually the institution should have sufficient land to provide all the pasture, feed and crops necessary to care for all the stock necessary to produce all the milk, butter, cheese, eggs, poultry, pork, bacon, ham, lard, as well as enough wheat to provide all the flour required. But I do not think it is profitable to carry very much more stock than you can raise feed for.



INDUSTRIAL BUILDING, POWER HOUSE AND COLD STORAGE BUILDING, STATE CUSTODIAL SCHOOL.



During the past two years we have paid the following amounts for the products enumerated:

Eggs	\$4,639 58
Cheese	248 25
Butter	8,315 05
Lard	2,312 87
Milk	15,916 13
Pork	1,492 26
Salt pork	36 91
Bacon	519 89
Ham	785 51
Poultry	345 09
Total.....	\$34,611 54

Since January 1 last, pork, bacon and ham have been so high that we have used none. I think if we were situated to produce all the above articles on the farm here, it would represent a saving to the State of about \$20,000.00 for the two years. It can be readily seen that the profit from this industry would in a very short time repay any reasonable outlay made to establish it on a good operating basis.

With sufficient pasture land, it would also be possible to raise a large part of the beef consumed as well as tallow for making soap.

In these remarks I am only showing the possibilities in the line of stock farming, and not with any desire to ask for immediate consideration of the same, for I fully realize that during these trying times through which we are passing, it is out of the question to consider anything beyond our bare necessities. But I think at some more auspicious time this matter should be thoroughly investigated.

As soon as the dairy is in operation, we expect to get a few hogs, as well as to get our poultry yards in good operation. We already have about 1,500 blooded chickens and a number of turkeys and geese and hope to increase our poultry flock next spring to between four and five thousand, provided conditions are such that we will be allowed to hold sufficient of our grain to feed them.

Three of our horses have died, but we have three good colts that will be ready to break to harness in a few months, so I think we can get along with what we have.

The orchard we planted here about three years ago is doing well and should commence to bear a little in about two years more.

I beg to renew my recommendations made two years ago relative to the preservation of game, other than predatory animals and birds, on State lands. And also for a law making it a felony for any person to aid or abet an inmate of any State institution to escape or elope.

SCHOOL DEPARTMENT.

The school department is in session each year from September 1st to June 1st. About 380 pupils attend and quite a number have been able to make considerable progress. The results obtained the past two years have been gratifying. Much of the industrial work is of a high order and the advancement made by a number in academic studies has been very good. The classes in music are making excellent progress. The new schoolrooms for the girls are very commodious and well arranged.

About 350 usually attend the Fair in Spokane every fall, which is always a great event for them.

We have a Red Cross Auxiliary here of about 140 members. Regular meetings have been held. A considerable sum of money has been raised and much Red Cross work has been done by the members.

Once a week there is a dance, concert and moving pictures in the assembly hall and chapel services are held every Sunday morning. Holidays are appropriately observed.

WAR CONDITIONS.

Like all lines of business and public work we are feeling the effects of the war. At times we are so short of help that I hardly know what to do. Enlistments and the draft have not directly taken many of our men, for the reason that we do not employ many men and always aim to get middle aged men when possible, as they are usually steadier and have better judgment and control. But it is the psychological effect of the war on all the people, both men and women, that has caused an unparalleled condition to prevail in all institutions. There seems to be an unsettled condition of mind. The withdrawal of several million workers in the Nation for foreign service under the colors; the establishment of thousands of new industries for the manufacture of munitions of war, shipbuilding, etc.; the great increase in wages paid for all lines of work; the great demand for clerks, stenographers, and other office help for the vastly increased departmental service of the National government, have all tended to produce a chaotic condition in the business world generally, by those lured by the temporary high wages offered. There are also a great many tramping from one institution to another. Many of these come here, stay a few days, put in their time and move on. But this feeling of unrest is not confined to institution people alone. Nearly every letter from our large list of correspondents notes a change in address. Relatives and friends of inmates by the hundred have been here to visit them the past few months, who have seldom or never been here before. This is of course explained by the fact that money has never before been so plentiful or easy to get. Others seem wild to get their children home and after they have had them awhile are as equally insistent to get them back here again, after they find their places have been filled by others on the waiting list.

With the tremendous events that are now transpiring in the making of the greatest history since the world began; at a time when the battle of the forces of enlightenment, liberty and progress are arrayed against those of oppression, militarism and barbarism, while for many weeks the trend of events seemed to indicate the triumph of the enemy invaders; with the wonderful energy in which our Nation entered the struggle, changing in a few days the entire business and social fabric of our civilization from the mighty commercial industries that had been built up through years of peace with all the world, to feverish, ceaseless preparation for war against the most insidious and ruthless enemy that ever invaded the homes and firesides of peace loving peoples, it is no wonder that the psychological effect upon mankind should be marked by a feeling of unrest and uncertainty.

A few of our old employees have loyally remained with us and although there are constant changes in the personnel of employees from month to

month, we have managed in some way to get along. This month (September, 1918) 25 per cent of our employees left and several others have their resignations in.

The following have been enlisted or drafted into the service of the Nation while employed here:

Cecil Wagner	T. W. McCartney	W. M. Navert
John Brower	B. H. O'Leary	F. H. Glover
Ira Bowlby		

A number of others were enlisted and rejected and others drafted shortly after leaving here. Mr. Navert was already enlisted in the Navy. He worked here during a furlough, at the expiration of which he returned to his post.

The last draft will take several now employed here. Several others have gone from here and taken service as Department Clerks.

The subscriptions by employees to the various Liberty Loans, Red Cross and other war measures have been very liberal and a spirit of patriotism has been manifested by employees and inmates upon all occasions. With but few exceptions, there has been a strong and concerted effort to assist in conserving in every possible way the various articles needed by the Government in the prosecution of the war, as well as to keep our expenditures down to the lowest possible limit. Whatever sacrifices were necessary have been borne willingly and without complaint.

REQUIREMENTS.

In presenting the requests for appropriations for the next biennium, commencing April 1, 1919, I realize that with the staggering financial load the war has brought to bear upon the taxpayers, and the request of the National Government to delay all new construction other than that which is absolutely necessary until after the war, we should at this time ask for nothing in the way of buildings or new work except what may be necessary to reduce operating expenses or to increase the efficiency of what we already have. I therefore submit the following estimates for the coming two years:

Salaries and wages.....	\$93,690 00
Operation	162,874 00
General expense	4,448 00
Other operations	2,400 00
Maintenance	8,300 00

Total maintenance charges for two years. \$271,712 00

Addition to boiler house.....	\$4,000 00
Boiler	10,500 00
Pipe, fittings and covering.....	5,000 00
Addition to septic tank.....	1,800 00
Grounds and roads.....	1,500 00
Poultry houses and piggery.....	1,500 00
Fencing	1,000 00
Electric and telephone wire and transformers.	1,400 00
Farm machinery	2,000 00
Stock	3,500 00
Repairs, renewals and improvements.....	3,000 00

Total for capital outlay..... \$35,200 00

Total for all appropriations for two years..... \$306,912 00

Maintenance.—I estimate the daily average attendance for the next two years at 630 and the daily per capita cost at 59 cents. The present allowance is based on 55 cents per day on the same items shown above. This is only an increase of four cents over the present allowance, while the cost of commodities have advanced from 45% to 200% over the cost two years ago. I think, though, that we can hold our per capita cost down to 59 cents, as the war will probably end within a year from November, after which there will be a great shrinkage in the cost of supplies of all kinds.

Addition to Boiler House.—It will be necessary to build an addition to the boiler house to accommodate a 350 H. P. boiler to provide heat for the five buildings on the boys' side, which are now being connected up with the central heating plant by the tunnel we are now building. These buildings each have a separate heating plant now, which are expensive and difficult to operate.

Pipe Fittings and Covering.—Owing to great increase in the price of pipe and fittings, we have been unable to finish entirely the work of connecting up the north buildings with the central heating plant. We will also need some pipe for the water supply and fire protection of the barn and a line to the poultry houses and piggery. Some of the pipe now in and to be placed need covering to conserve heat and prevent waste of coal. Pipe and fittings will also be needed to connect the new boiler with the system.

Addition to Septic Tank.—The present septic tank was built when the first buildings were constructed here and was designed to accommodate 500. As we now have nearly 700 people here and are rapidly increasing, an addition is urgently needed to take care of the sewage. The addition proposed will bring the capacity of the septic tank up to 1,000 of population.

Grounds and Roads.—As this is a new site and devoid of trees and lawns, it is important that the parking of the grounds be carried forward without delay and roadways built, as it takes years for the trees to grow to a size sufficient to add beauty to the grounds and afford shade. Most of the amount asked for is for material, as a large part of the work will be done by our regular force.

Poultry Houses and Piggery.—It is desired to carry about 5,000 poultry and 75 hogs, the profit from which in one year should amount to more than the appropriation asked for.

Fencing.—Most of the fences on the land we acquired were down and now that we are to have stock, a large amount of permanent fencing will be necessary.

Electric and Telephone Wiring and Transformers.—We will have to carry wires from the pole line to the new dairy barn and connect the cottages with a telephone system.

Farm Machinery.—With the amount of grain we have to harvest every year, I think it would be profitable to have a small combined harvester. They save much labor as well as grain, as the grain is cut, threshed and sacked all in one operation. Now we hire the threshing done and besides the expense, sometimes have to wait for weeks before the thresher arrives

and there is danger of losing the crop should heavy rains set in. A few other implements are also needed.

Stock.—Owing to the scarcity of feed we have been able to get about 20 head of cows to winter from September to May, from which we get all the milk they produce, without other cost than their keep. Milk is rapidly advancing in price and is hard to get in the quantities we require. It is desirable to get a dairy herd established as soon as possible and will need about 40 head of Holstein cows and a graded bull.

Repairs, Renewals and Improvements.—There is always more or less repairs, replacements and minor improvements to be made in keeping up 14 large buildings and other appurtenances and surrounding premises, which it is impossible to enumerate so far ahead, or to anticipate. There are two large shacks that were used for the workmen on the first buildings erected here. Those are now an eyesore on the premises. It is designed to take them down, save what lumber is possible and with some new lumber erect a large shed for housing implements, farm machinery and wagons. There is also considerable painting to be done.

In the above estimate for construction I have figured on utilizing our regular force as far as possible and hauling the material ourselves. The work cannot be done by contract at the prices mentioned.

SALARY OF SUPERINTENDENT.

The salary of the Superintendent here was formerly \$1,200.00 per annum. At the last session of the legislature, a clause was inserted in the appropriation bill for this institution fixing the salary of the superintendent at \$2,400.00 per annum.

The salaries of all superintendents are specifically fixed by statute and I am of the opinion that the provisions of the General Appropriation bill expire by limitation March 31, 1919, and that after that date, the salary of the superintendent of this institution will revert to \$1,200.00 unless section 5, page 381, Session Laws of 1907 is amended, fixing the salary at \$2,400.00.

I do not call your attention to this matter through any personal considerations, as I am perfectly willing to work here for \$1,200.00 per annum during the continuance of the war (if I am needed here), but if I should be called to other service, it might be difficult to get some one to undertake the work at \$1,200.00 per annum.

LOSS BY FIRE.

On the night of July 11, 1918, we lost by fire the barn at the Hage place, which we have used for storing hay, together with about fifty tons of hay and a straw cutter. The fire was set by one of our boys who escaped from here the afternoon of the 11th, was recovered the afternoon of the 12th and confessed that it was he who started the fire, as well as numerous other fires that were started in outbuildings near the old school and at various points in the timber between Medical and Clear Lakes. As one of the patients in the criminal ward at the Eastern State Hospital had escaped that same day and was said to be a firebug, it was naturally supposed that he was the incendiary. This boy had been here a number of years, and while he had ran away once or twice before, usually came back himself and had never attempted to do any damage before. He broke into a house after

leaving here and got the matches with which he started the fires. Our estimated loss was: Barn, \$600.00; 50 tons of hay, \$1,250.00; straw cutter, \$60.00. Total \$1,910.00.

GENERAL HEALTH.

We have had a great deal of sickness during the past two years, as we have been visited by several severe epidemics.

During November, 1916, one of the little girls at the old school was taken with what appeared to be catarrhal tonsillitis. A little later another girl had the same trouble. Both were isolated, cultures taken, which proved to be negative. Second cultures were taken, as one of the cases developed toxic symptoms and the characteristic membrane had appeared. They were at once isolated and the second test proving positive in both cases, anti-toxin was administered and complete quarantine measures instituted. A few days later another girl came down with it in another ward. All were then moved to an isolated dormitory, thorough disinfection and preventive measures instituted and no further cases developed. All made good recovery.

In December one of the boys at the new institution a mile and a half away developed typical diphtheric symptoms, was at once isolated and anti-toxin administered. In February, 1917, another small boy in the same cottage developed the disease and the same measures were taken as in the other case. No further cases developed and all made good recovery.

On April 7, 1917, we were invaded by a serious epidemic of measles, which is more to be dreaded than any other disease in institutions of this character. This continued until June 22nd, during which time 182 children had the disease, which was of a very virulent form. There were 15 fatalities—13 from the disease, and in two the measles was contributory.

On August 25, 1917, one of the boys developed symptoms of paratyphoid, which was followed shortly after by four other cases, all in the boys' department but in different cottages. All recovered.

Three days after admission, January 27, 1918, a boy came down with German measles and although immediately quarantined, other cases soon appeared and soon spread rapidly, until April 1st we had had 255 cases. It was of a very mild type and as a rule patients were only sick three or four days, and all recovered.

In February, 1918, a new boy recently admitted came down with varicella, or chickenpox. Six other cases, all in the boys' division, developed and all made good recovery. Another boy admitted June 25th, 1918, came down with it on July 10th and 35 other boys and girls contracted the disease, all making good recovery.

During the two years there has appeared at various periods, 13 cases of erysipelas, of which 5 were facial and 10 of the migratory form. Of the 13 attacked eight were Mongolians and all had the migratory type. All recovered but one.

During the two years ending September 30, 1918, there have been 25 cases of broncho-pneumonia and three of lobar pneumonia. Twelve of the fatal cases occurred at the time of the measles epidemic and were all confined to the custodial divisions, where the paralytics and helpless are kept, there being no deaths in the upper grade cottages. In pneumonia following measles, death usually took place the second or third day after development of pneumonia. Two cases were also exhausted by epileptic seizures and



NEW DAIRY BARN, STATE CUSTODIAL SCHOOL.

were ready victims to the complication. Two deaths occurred in very young children, one being a cretin 10 months old, who was taken sick immediately on admission six days previous to death. The other, a weak paralytic, nearly four years old, succumbed 12 days after admission.

Aside from the epidemics mentioned the general health of the inmates has been fair.

The State Dentist spent two months here last spring and did the necessary dental work. As he has no doubt made a report direct to you, I am not making a detailed report on this work.

The case record of each inmate has been carefully written up by the Resident Physician and brought down to date, so that we will soon have a complete record of each inmate.

CONCLUSION.

Tables and statements showing all the operations and financial transactions of the institution for the biennium, together with complete inventories and valuation of all public property committed to my charge are hereto attached and made a part of this report.

We have had an unusually large number of visitors during the past biennium. The Governor has honored us with several welcome visits, as well as many state, county and city officials, members of the legislature, clergymen, teachers, nurses, physicians and others interested in this line of work. All have given favorable expressions regarding the new buildings and have spoken encouraging words with reference to the work we are trying to do here.

Christmas eve before last the Ad Club of Spokane came out with a large delegation and with gifts for every inmate in the institution and joined with us in the celebration. They also contributed \$50.00 toward our organ fund.

Last Christmas eve members of the Elks Lodge of Spokane to the number of about 25 came out with wagon loads of Christmas cheer, with Ex-Mayor Hindley officiating in his inimitable manner as Santa Claus, and with the justly celebrated Elks Quartette, who sang song after song for us to the great delight of the 550 present at the Christmas tree exercises. They also presented several specialties, which with the excellent program presented by the children, provided an entertainment that will never be forgotten and would be hard to excel anywhere. It was all very wonderful, this Christmas spirit. It is such kindnesses as these that bring happiness to our community and make life worth living. Many contributions of money and gifts for our Christmas celebrations were made by merchants and individual friends from all parts of the State, so that there was ample Christmas cheer for all. We are certainly grateful to our hundreds of friends who have contributed so much to the happiness of our inmates.

In closing, I desire to record my heartfelt thanks to all those who have stood so loyally by me during many trying periods and to all employees, officers and inmates who have labored so unceasingly for the good of the service here.

I thank you, gentlemen, for your wise counsel and advice, as well as for the confidence you have always manifested. Our best hope for the future is that we may continue to have your continued support and esteem.

Table No. 1.

**MOVEMENT OF POPULATION FROM OCTOBER 1, 1916, TO
SEPTEMBER 30, 1918.**

YEAR ENDING SEPTEMBER 30, 1917	Male	Female	Total
Present October 1, 1916.....	296	243	539
Admitted October 1, 1916, to September 30, 1917.....	66	58	124
Readmitted during year.....	18	17	30
Total enrollment for year.....	375	318	693
Discharged October 1, 1916, to September 30, 1917.....	37	33	70
Died during year.....	18	19	32
Eloped during year.....	3		3
Total vacancies created.....	53	52	105
Present September 30, 1917.....	322	266	588
	375	318	693

MOVEMENT OF POPULATION FOR YEAR ENDING SEPTEMBER 30, 1918.

YEAR ENDING SEPTEMBER 30, 1918	Male	Female	Total
Present October 1, 1917.....	332	266	598
Admitted October 1, 1917, to September 30, 1918.....	41	41	82
Readmitted during year.....	17	12	29
Total enrollment.....	390	319	699
Discharged October 1, 1917, to September 30, 1918.....	35	31	66
Died during year.....	7	5	12
Eloped during year.....	1		1
Total vacancies created.....	43	36	79
Present September 30, 1918.....	337	283	620
	390	319	699

MOVEMENT OF POPULATION FOR TWO YEARS ENDING SEPTEMBER 30, 1918.

TWO YEARS ENDING SEPTEMBER 30, 1918	Male	Female	Total
Present October 1, 1916.....	296	243	539
Admitted October 1, 1916, to September 30, 1918.....	107	99	206
Readmitted during same period.....	30	29	59
Total enrollment.....	433	371	804
Discharged October 1, 1916, to September 30, 1918.....	72	64	136
Died during period.....	20	24	44
Eloped during period.....	4		4
Total vacancies created.....	96	88	184
Present September 30, 1918.....	337	283	620
	433	371	804

Table No. 2.

SHOWING AGES OF TWO HUNDRED SIXTY-FIVE INMATES ADMITTED
FROM OCTOBER 1, 1916, TO SEPTEMBER 30, 1918.

Under 10 years.....	68
10 to 15 years.....	82
15 to 21 years.....	83
21 to 50 years.....	82
	265

Table No. 3.

SHOWING AGES OF SIX HUNDRED AND TWENTY INMATES PRESENT
SEPTEMBER 30, 1918.

AGES	Male	Female	Total
Under 6 years.....	16	5	21
6 to 10 years.....	21	25	46
10 to 15 years.....	92	56	148
15 to 21 years.....	121	105	226
21 to 50 years.....	87	92	179
	337	283	620

Table No. 4.

Showing Causes Assigned by Relatives or Examining Physician for Condition
of Six Hundred Twenty Inmates Present September 30, 1918.

Accident	9
Acute poliomyelitis	7
Acute sickness	84
Birth injury	5
Cerebral hemorrhage	1
Cerebral spinal meningitis.....	7
Chorea	1
Congenital	283
Consanguinity	1
Cretinism	2
Dysatocia	1
Epilepsy	4
Hydrocephalus	5
Malnutrition	1
Masturbation	2
Maternal shock	4
Neuropathic inheritance	37
No cause given.....	63
Pituitary disturbance	1
Post typhoid	1
Premature birth	1
Prenatal influence	6
Prolonged labor	1
Result of burn.....	1
Result of operation.....	1
Syphilis, acquired	1
Syphilis, congenital	3
Traumatism	23
Twin birth	1
Unknown	63

Total..... 620

Table No. 5.
DEATH RECORD FOR TWO-YEAR PERIOD COMMENCING OCTOBER 1, 1916,
AND ENDING SEPTEMBER 30, 1918.

CAUSE OF DEATH	Male	Female	Total
Broncho pneumonia, acute.....		2	2
Cerebral hemorrhage.....	3		3
Enteritis, chronic.....	1	1	2
Erysipelas, migratory.....		1	1
Exhaustion from epilepsy.....	2	3	5
Gastritis, chronic.....		1	1
Gastro-enteritis, acute.....	2	1	3
Gastro-enteritis, chronic.....	1		1
Gastric ulcer.....		2	2
Glosso-pharyngeal paralysis.....		1	1
Laryngeal paralysis, acute.....		2	2
Laryngeal stenosis, acute.....		1	1
Measles.....	6	7	13
Organic disease of heart.....	1		1
Peritonitis, acute.....	1		1
Pulmonary oedema.....	2	1	3
Pulmonary tuberculosis, acute.....		1	1
Status epilepticus.....	1		1
Totals.....	20	24	44

Table No. 6.

SHOWING COUNTIES FROM WHICH TWO HUNDRED SIXTY-FIVE INMATES
WERE ADMITTED DURING THE TWO YEARS COMMENCING OCTOBER 1,
1916, AND ENDING SEPTEMBER 30, 1918.

COUNTIES	ADMITTED			READMITTED			GRAND TOTAL		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Adams.....									
Asotin.....	2	1	3	1		1	3	1	4
Benton.....	1	1	2	2		2	3	1	4
Chelan.....		2	2		1	1		3	3
Clallam.....									
Clarke.....	1	3	4	1	2	3	2	5	7
Columbia.....	1		1				1		1
Cowlitz.....	1	2	3				1	2	3
Douglas.....		2	2					2	2
Ferry.....				1	1	1		1	1
Franklin.....	1		1	1		1	2		2
Garfield.....									
Grant.....	1	1	2				1	1	2
Grays Harbor.....	4	1	5	2		2	6	1	7
Island.....	3		3		1	1	3	1	4
Jefferson.....									
King.....	39	31	70	7	8	15	46	39	85
Kitsap.....	1	2	3				1	2	3
Kittitas.....	2	1	3		1	1	2	2	4
Klickitat.....									
Lewis.....	3	2	5				3	2	5
Lincoln.....									
Mason.....		2	2					2	2
Okanogan.....									
Pacific.....	1	1	2	1		1	2	1	3
Pend Oreille.....		1	1					1	1
Pierce.....	14	10	24	5	3	8	19	13	32
Skagit.....		2	2					2	2
Skamania.....									
Snohomish.....	6	5	11	2	2	4	8	7	15
Spokane.....	10	11	21	3	3	6	13	14	27
Stevens.....		2	2		1	1		3	3
Thurston.....	1	6	7	1	2	3	2	8	10
Wahkiakum.....									
Walla Walla.....	2	1	3	2	1	3	4	2	6
Whatcom.....	6	2	8	1	1	2	7	3	10
Whitman.....	2	1	3		1	1	2	2	4
Yakima.....	5	6	11	1	1	2	6	7	13
Totals.....	107	99	206	30	29	59	137	128	265

Table No. 7.

SHOWING COUNTIES FROM WHICH SIX HUNDRED TWENTY INMATES
PRESENT SEPTEMBER 30, 1918, CAME.

COUNTIES	Male	Female	Total
Adams.....	1	.....	1
Asotin.....	3	2	5
Benton.....	3	1	4
Chelan.....	4	7	11
Clallam.....	3	.....	3
Clarke.....	8	4	12
Columbia.....	2	.....	2
Cowlitz.....	5	2	7
Douglas.....	3	4	7
Ferry.....	1	1	1
Franklin.....	2	2	4
Garfield.....	1	.....	1
Grant.....	1	2	3
Grays Harbor.....	10	6	16
Island.....	4	4	8
Jefferson.....	2	1	3
King.....	101	85	186
Kitsap.....	6	2	8
Kittitas.....	6	4	10
Klickitat.....	1	.....	1
Lewis.....	8	5	13
Lincoln.....	9	4	13
Mason.....	.....	3	3
Okanogan.....	3	1	4
Pacific.....	5	3	8
Pend Oreille.....	.....	1	1
Pierce.....	34	29	63
Skagit.....	1	9	10
Skamania.....	1	.....	1
Snohomish.....	21	27	48
Spokane.....	29	21	50
Stevens.....	7	2	9
Thurston.....	4	7	11
Wahkiakum.....	.....	.....	.....
Walla Walla.....	10	8	18
Whatcom.....	20	14	34
Whitman.....	9	8	17
Yakima.....	10	14	24
Totals.....	337	283	620

Statement No. 1.

STATEMENT SHOWING OFFICERS AND EMPLOYEES AUTHORIZED AND ANNUAL SALARIES PAID SAME.

NAMES	POSITION	Annual Salary
Woodruff, S. C.	Superintendent.....	\$2,400 00
Walsh, Rex R.	Steward and accountant.....	1,200 00
Jacobs, A. M.	Attendant.....	600 00
Foster, John.	Attendant.....	600 00
Woods, J. A.	Attendant.....	600 00
Rawson, Carrie.	Attendant.....	600 00
Kribbs, Sue.	Attendant.....	600 00
Palmer, J. A.	Attendant.....	600 00
Hunter, B. T.	Attendant.....	600 00
Calhoun, G. A.	Attendant.....	600 00
Kinsey, J. A.	Attendant.....	600 00
Burns, Thomas.	Attendant.....	600 00
Moore, W. D.	Attendant.....	600 00
Bauer, Ida.	Attendant.....	540 00
Hallett, Duncan.	Attendant.....	540 00
Foster, Arietta.	Attendant.....	540 00
Bauer, Freda.	Attendant.....	540 00
Calhoun, Mrs. G. A.	Attendant.....	540 00
Ashley, Cora.	Attendant.....	540 00
Plank, Mary.	Attendant.....	540 00
Palmer, Mary.	Attendant.....	540 00
Simonton, Anna.	Attendant.....	540 00
Reid, Ella.	Attendant.....	540 00
Reid, Stella.	Attendant.....	540 00
Navert, Mrs. W. M.	Attendant.....	540 00
Hemsley, Blanche.	Attendant.....	540 00
Senkovitz, Irene.	Attendant.....	540 00
Bowlby, Mary.	Attendant.....	540 00
Lund, Inga.	Attendant.....	540 00
Dinneen, Mamie.	Attendant.....	540 00
Breslin, Edith.	Attendant.....	540 00
Archibald, May.	Attendant.....	540 00
McConkie, Gertrude.	Baker.....	780 00
Brady, Carrie.	Chief cook.....	900 00
Reid, Jessie.	Assistant cook.....	780 00
Hull, Luda E.	Assistant cook.....	780 00
Reid, Roseco.	Engineer.....	1,200 00
Lay, G. L.	Assistant engineer.....	900 00
Dennison, Henry.	Farmer.....	720 00
Vergin, Emil.	Assistant farmer.....	540 00
Leech, Edwin.	Fireman.....	600 00
Hunter, F. M.	Laundryman.....	720 00
Walsh, Alice.	Laundress.....	720 00
Woodruff, Edith M.	Matron.....	600 00
Bowlby, F. E.	Physician.....	1,500 00
Jacobs, C. A.	Supervisor.....	720 00
Guyer, Joye.	Supervisor.....	720 00
Signor, Clara.	Seamstress.....	720 00
Hamilton, Adelaide K.	Teacher.....	660 00
Fowler, Louise.	Teacher.....	660 00
Fisher, E. A.	Teacher.....	660 00
Mead, Ruth.	Teacher.....	660 00
Mannila, Hilda.	Teacher.....	660 00
Whitaker, Lois.	Teacher.....	660 00
Gurr, E. W.	Teamster.....	480 00
Harrison, Ethel.	Waitress.....	420 00
Lay, Mrs. G. L.	Waitress.....	420 00
Day, Frank.	Fireman (Inmate).....	30 00
Love, Tom.	Fireman (Inmate).....	30 00
Garvis, Dominic.	Fireman (Inmate).....	60 00
Willscroft, Bert.	Fireman (Inmate).....	60 00
Dean, Charles.	Kitchen helper.....	60 00

Statement No. 2.

**MONTHLY STATEMENT OF FARM AND GARDEN PRODUCTS AND VALUE OF
SAME DURING PERIOD COMMENCING OCTOBER 1, 1916,
AND ENDING SEPTEMBER 30, 1917.**

1916						
October....	13,217 pounds..	Apples.....	\$0.02	\$266 34		
	14,540 pounds..	Beets.....	.01½	218 10		
	12,290 pounds..	Carrots.....	.01½	184 35		
	25 6-12 dozen...	Eggs.....	.40	10 20		
	713 pounds..	Watermelon.....	.01	7 13		
	12,900 pounds..	Onions, dry.....	.02½	354 75		
	6,210 pounds..	Pumpkins.....	.01	62 10		
	98,948 pounds..	Potatoes.....	.01½	1,484 22		
	10,280 pounds..	Parsnips.....	.01½	179 90		
	1,675 pounds..	Pears.....	.02	33 50		
	890 pounds..	Plums.....	.02	19 80		
	5,831 pounds..	Tomatoes, green.....	.01	53 31		
	606 pounds..	Tomatoes, ripe.....	.03	18 18		
	20,180 pounds..	Turnips.....	.01½	302 76		
	22,754 pounds..	Squash.....	.01	227 54		\$3,422 18
November..	19 3-12 dozen...	Eggs.....	\$0.50	\$9 62		9 62
December..	234 pounds..	Chicken.....	\$0.20	\$46 80		
	9 6-12 dozen...	Eggs.....	.50	4 75		51 55
1917						
January....	10 dozen...	Eggs.....	\$0.40	\$4 00		
	20 cords...	Wood, cut.....	5.00	100 00		104 00
February..	8 10-12 dozen...	Eggs.....	\$0.40	\$3 09		3 09
March.....	73 4-12 dozen...	Eggs.....	\$0.30	\$22 00		22 00
April.....	136 10-12 dozen...	Eggs.....	\$0.35	\$47 80		
	1,169 pounds..	Parsnips.....	.02½	29 22		77 11
May.....	121 8-12 dozen...	Eggs.....	\$0.35	\$42 58		
	384 pounds..	Rhubarb.....	.02	7 68		50 26
June.....	150 pounds..	Beets.....	\$0.02	\$3 00		
	51 3-12 dozen...	Eggs.....	.35	17 94		
	384 pounds..	Lettuce.....	.02	6 68		
	90 dozen...	Green onions.....	.35	31 50		
	73 dozen...	Radishes.....	.35	25 55		
	729 pounds..	Spinach.....	.03	21 87		106 54
July.....	480 pounds..	Beets.....	\$0.02½	\$12 00		
	227 pounds..	Beans.....	.06	13 62		
	1,677 pounds..	Cabbage.....	.02½	41 98		
	500 pounds..	Carrots.....	.02	10 00		
	80 dozen...	Eggs.....	.40	32 00		
	95 tons....	Wheat hay.....	20.00	1,900 00		
	30 tons....	Timothy hay.....	20.00	600 00		
	517 pounds..	Lettuce.....	.02	10 34		
	115 dozen...	Green onions.....	.30	34 50		
	500 pounds..	Peas.....	.06	35 94		
	85 dozen...	Radishes.....	.35	21 25		
	225 pounds..	Rhubarb.....	.02	4 50		
	1 crate...	Raspberries.....		2 75		
	280 pounds..	Turnips.....	.02½	7 00		2,725 83

Statement No. 2—Continued.

**MONTHLY STATEMENT OF FARM AND GARDEN PRODUCTS AND VALUE OF
SAME DURING PERIOD COMMENCING OCTOBER 1, 1916,
AND ENDING SEPTEMBER 30, 1917.**

August....	2,202 pounds.	Beets.....	\$0.02	\$44 04	
	3,265 pounds.	Beans.....	.05	163 25	
	3,215 pounds.	Cabbage.....	.03	96 45	
	1,774 pounds.	Carrots.....	.02½	44 35	
	1,214 dozen...	Cucumbers.....	.10	121 40	
	73 5-12 dozen...	Eggs.....	.40	29 36	
	223 dozen...	Green onions.....	.30	68 40	
	2,287 pounds.	Potatoes.....	.02½	37 17	
	1,032 pounds.	Peas, field.....	.06	61 92	
	251 pounds.	Peas.....	.06	15 06	
	535 pounds.	Tomatoes.....	.03	17 55	
	708 bushels.	Oats.....		607 50	
	273 bushels.	Barley.....		350 00	
	1,543 bushels.	Wheat.....		3,240 30	
September.	720 pounds.	Beets.....	\$0.02	\$14 40	
	2,970 pounds.	Beans.....	.05	148 50	
	900 pounds.	Cabbage.....	.02½	22 50	
	530 pounds.	Carrots.....	.02½	18 25	
	1,600 dozen...	Cucumbers.....	.10	160 00	
	1,178 dozen...	Corn.....	.10	117 80	
	82 3-12 dozen...	Eggs.....	.55	17 69	
	770 pounds.	Onions, dry.....	.02½	19 25	
	32,866 pounds.	Potatoes.....	.02½	739 48	
	193 pounds.	Peas, seed.....	.10	19 30	
	78 pounds.	Peas, field.....	.06	4 68	
	300 pounds.	Rhubarb.....	.02	6 00	
	3,861 pounds.	Tomatoes.....	.03	109 83	
	64 pounds.	Squash.....	.01	64	
Total 1917 crop.....					\$12,863 65

Statement No. 3.

**MONTHLY STATEMENT OF FARM AND GARDEN PRODUCTS AND VALUE OF
SAME DURING PERIOD COMMENCING OCTOBER 1, 1917,
AND ENDING SEPTEMBER 30, 1918.**

1917					
October....	4,251 pounds.	Apples.....	\$0.01	\$42 61	
	21,945 pounds.	Beets.....	.02	438 90	
	4,090 pounds.	Cabbage.....	.02½	102 25	
	45,290 pounds.	Carrots.....	.02	905 80	
	335 dozen...	Cucumbers.....	.10	33 50	
	5,550 dozen...	Corn.....	.10	555 00	
	17 4-12 dozen...	Eggs.....	.60	10 00	
	310 pounds.	Grapes.....	.05	15 50	
	1 ton.....	Hay, timothy.....		20 00	
	16,410 pounds.	Onions, dry.....	.03½	615 33	
	102,250 pounds.	Potatoes.....	.01½	1,739 88	
	850 pounds.	Prunes.....	.02	17 00	
	924 pounds.	Pears.....	.02	18 43	
	2,110 pounds.	Rutabagas.....	.01½	39 93	
	19 barrels..	Sauer kraut.....	12.50	237 50	
	950 pounds.	Tomatoes.....	.03	28 50	
	9,500 pounds.	Squash.....	.02	190 00	\$5,060 33
November..	2,240 pounds.	Cabbage.....	\$0.02½	\$562 00	
	185 pounds.	Chicken.....		15 50	
	27 9-12 dozen...	Eggs.....	.60	16 50	
	22,520 pounds.	Parsnips.....	.02	450 40	1,044 55
December..	9 10-12 dozen...	Eggs.....	\$0.60	\$5 90	5 90
1918					
January...	4 3-12 dozen...	Eggs.....	\$0.60	\$2 16	2 16
February..	20 11-12 dozen...	Eggs.....	\$0.50	\$10 46	10 46
March.....	100 2-12 dozen...	Eggs.....	\$0.35	\$35 06	
	120 pounds.	Chicken.....		12 50	47 56
April.....	121 1-12 dozen...	Eggs.....	\$0.35	\$42 73	
	12 only....	Eggs, turkey.....	.50	6 00	43 73
May.....	115 7-12 dozen...	Eggs.....	\$0.35	\$39 45	
	90 only....	Eggs, turkey.....	.50	45 00	84 45
June.....	83 4-12 dozen...	Eggs.....	\$0.45	\$37 50	
	1,359 pounds.	Lettuce.....		40 77	
	750 dozen...	Onions, green.....	.35	262 50	
	200 pounds.	Peas.....	.07	14 00	
	76 dozen...	Radishes.....	.35	26 80	
	600 pounds.	Rhubarb.....	.03	18 00	
	1,470 pounds.	Spinach.....	.03	44 10	383 47
July.....	2,050 pounds.	Beets.....	\$0.03	\$61 50	
	250 pounds.	Beans.....	.07	17 50	
	450 pounds.	Cabbage.....	.04½	20 45	
	500 pounds.	Carrots.....	.03	15 00	
	76 9-12 dozen...	Eggs.....	.45	24 34	
	55 tons....	Hay.....	30.00	1,650 00	
	600 pounds.	Lettuce.....	.03	18 00	
	50 dozen...	Onions, green.....	.35	17 50	
	850 pounds.	Peas.....	.07	49 50	
	1,470 pounds.	Spinach.....	.03	44 10	1,917 39

Statement No. 3—Continued.

**MONTHLY STATEMENT OF FARM AND GARDEN PRODUCTS AND VALUE OF
SAME DURING PERIOD COMMENCING OCTOBER 1, 1917,
AND ENDING SEPTEMBER 30, 1918.**

August....	28 boxes..	Apples.....	\$1.25	\$35 00	
	980 pounds.	Beets.....	.02½	24 50	
	1,515 pounds.	Beans.....	.06	93 30	
	1,710 pounds.	Cabbage.....	.04	68 40	
	1,910 pounds.	Carrots.....	.02½	47 75	
	940 dozen..	Cucumbers.....	.10	94 00	
	71 8-12 dozen..	Eggs.....	.45	32 08	
	5 tons....	Hay.....	30.00	150 00	
	1,530 pounds.	Onions.....	.02½	51 07	
	7,000 pounds.	Potatoes.....	.02½	175 00	
	1,060 pounds.	Spinach.....	.03	32 70	
	35 pounds.	Tomatoes.....	.10	3 50	
	30 pounds.	Turnips.....	.02½	75	
	35 pounds.	Squash.....	.02	70	
	25 tons....	Straw.....	10.00	250 00	
	53 bushels.	Barley.....		102 00	
	460 bushels.	Oats.....		467 00	
	594½ bushels.	Wheat.....		1,182 73	
					2,843 46
September.	20 boxes...	Apples.....	\$1.50	\$30 00	
	870 pounds.	Beets.....	.02	17 40	
	1,515 pounds.	Beans.....	.06	75 75	
	660 pounds.	Cabbage.....	.03½	24 75	
	2,025 pounds.	Carrots.....	.02	40 50	
	3,845 dozen..	Cucumbers.....	.10	384 50	
	3,875 dozen..	Corn.....	.10	387 50	
	65 6-12 dozen..	Eggs.....	.50	32 75	
	14,630 pounds.	Onions.....	.02½	365 75	
	13,940 pounds.	Potatoes.....	.02½	348 50	
	4,236 pounds.	Tomatoes.....	.01½	64 29	
	600 pounds.	Squash.....	.01	6 00	
	30 tons....	Ensilage.....	6.00	480 00	
	505 gallons.	Milk.....	.24	121 20	
					2,378 80
		Total 1918 crop.....			\$13,827 85

SUMMARY

Total value 1917 crop.....\$12,863 65

Total value 1918 crop.....13,827 85

Total value.....\$26,691 50

Statement No. —

STATE CUSTODIAL SCHOOL.

Medical Lake, Washington.

Financial showing of operation of farm and garden for the two years commencing October, 1916, and ending September 30, 1918.

DEBITS.

Inventory of stock and equipment on hand September 30, 1916, as shown in last report, as follows:

1916	
October	Live stock \$1,712 60
	Feed and grain..... 3,508 20
	Machinery and tools..... 2,156 20
	Machinery and tools..... 97 00
	Miscellaneous 177 72
	Pay roll 160 00
	Doubletree, wood, etc..... 7 95
	Brake pulleys 1 08
	Rivet machine 65
	Brush hooks 2 50
	Springtooth harrow 27 50
	Spiketooth harrow 40 00
	Whiffletree hooks 80
	Shoe nails 2 56
	Rivets 20
	Singletree rings 1 68
	Singletree rings 1 26
	Plow bolts 60
November	Pay roll 130 00
	Shoe calks 75
	Manure spreader 135 00
	Shoeing 41 50
	Collar pads 4 75
December	Pay roll 130 00
	Shoeing 8 50
	Veterinary 5 00
1917	
January	Pay roll 130 00
	Bob sleds 49 30
	Shoeing 14 60
	Wagon jack 1 50
February	Pay roll 130 00
	Service of stallion..... 25 00
	Shoe calks, axle grease, etc..... 6 00
	Shoeing, etc. 25 55
March	Pay roll 129 99
	Veterinary 7 50
	Veterinary 3 00
	Horse hire 6 75
	Horse—Billy 180 00
	Horse—Bud 160 00
	1 gray mare—Fanny; 1 bay mare—Bess..... 335 00
	2 horse collars..... 10 92
	Seeds 39 85
	Seeds 41 30
	Seed potatoes, 25,000 lbs. at 3c..... 750 00
	Shoe calks 81
	Wagon 100 94
	Shoeing, etc. 31 60

April	Pay roll	145 00
	Harness leather	12 08
	Harness repairs	22 78
	Drill repairs	3 09
	Plow repairs	2 75
	Horse collar	5 58
May	Pay roll	145 00
	Horse hire	20 25
	Horse and man hire.....	125 00
	Dump cart harness.....	24 25
	Plants	7 20
	Hay forks	9 18
	Spray nozzles	1 50
	Sack twine	15 84
	Squirrel traps	3 06
	Plants	36 20
	Poultry netting	8 00
	Incubator	20 40
June	Pay roll	173 99
	Dump cart	85 00
	Potato planter repairs.....	2 08
	Two horse cultivators.....	66 75
	Corn planter	55 00
	Potato cutter	14 00
	Plow repairs	14 20
	Chicken feed	3 75
	Hog wire	14 55
	Shoeing and repairs.....	36 50
	Eggs for setting.....	3 60
	Plants	76
July	Pay roll	208 06
	Binder repairs	7 08
	Repairs	7 50
	Binder twine	34 05
	Seed, etc.....	135 02
	Harrow repairs	4 20
	Plowshares	8 60
	Grain bags	75 00
August	Pay roll	230 00
	Axle grease, rivets.....	1 75
	Heading	45 90
	Shoeing	25 00
	Cabbage plants	4 00
	Hay, home product.....	200 00
	Threshing	166 51
September	Pay roll	155 00
	Wagon reach	7 00
	Plow beam	6 00
	Veterinary service	6 50
	Seeds	50
October	Pay roll	190 00
	Wagon repairs, etc.....	11 31
	Fan mill and potato digger repair.....	6 71
	Binder repairs	19 81
	Neck yokes and brake blocks.....	6 70
	Hay and grain.....	264 00
	Harness repairs	11 64

November	Pay roll	101 38
	Plow repairs	5 40
	Plow repairs	11 60
	Wagon repairs	8 50
	Horse blankets	20 25
	Shoeing, etc.....	31 15
	Hay and grain feed.....	300 00
December	Pay roll	139 67
	Team lines and pole strap.....	20 50
	Veterinary	5 00
	Shoeing	36 00
	Hay and grain.....	493 62
1918		
January	Pay roll	78 87
	Plow repairs	4 50
	Wagon repairs	2 50
	Road plow	62 65
February	Pay roll	77 68
	Hay and grain.....	614 50
March	Pay roll	105 00
	Hatching eggs	28 00
	Hatching eggs, ducks.....	21 60
	Turkeys	20 00
	Hatch eggs	25 00
	Oil for incubators.....	19 40
April	Pay roll	155 00
	Seed potatoes	80 92
	Poultry netting	35 88
	Seed potatoes	20 91
	Shoeing	16 50
	Distillate	8 86
	Distillate	8 94
	Plowing	127 50
	Seed and feed.....	417 50
May	Pay roll	155 00
	Plants	27 80
	Poultry netting and doubletrees.....	65 78
	Seeds	46 75
	Seeds	60 85
	Seed potatoes	22 20
	Seed potatoes	7 35
	Tools	4 85
	Hoes	15 00
	Feed and seed.....	1,136 95
June	Pay roll	137 57
	Cabbage plants	28 00
	Seeds	57 49
	Tomato plants	15 00
	Barley	56 00
	Blinder repairs, etc.....	32 01
July	Cabbage plants	14 00
	Pay roll	150 00
	Incubator repairs	8 63
	Plowshares, etc.....	14 10
	Plow	23 50
	Shoeing	28 50
	Hay	106 05

August	Pay roll	160 00
	Seed	7 00
	Binder twine, etc.....	14 50
	Drill repairs	7 57
September	Pay roll	162 66
	Binder repairs	18 17
	Binder repairs	27 40
	Horse hire	20 50
	Cow	65 00
	Cows	300 00
	Shoeling	24 25
	Cow feed	20 00
	Threshing	62 01
	Plow repairs	11 81
	Bringing cows here.....	38 80

Total Debits.....\$19,258 75

CREDITS.

October	Produce delivered	\$3,422 18
	Labor off farm, sand for tunnel.....	11 61
	Horse feed, haul sand—	
	Feed 4 horses, 13 days, haul sand.....	19 50
	Feed 1 horse, 18 days, dump cart.....	6 30
	Feed 4 horses, 8 days, grading.....	12 00
	Haul laundry	30 00
	Two horses, 31 days, haul laundry.....	23 25
November	Produce delivered	9 62
	Haul coal	42 66
	Haul laundry, etc.....	30 00
	Feed 2 horses, 31 days, laundry.....	23 25
	Feed 4 horses, 25 days, coal, etc.....	37 50
	Feed 4 horses, 9 days, coal, etc.....	13 50
	Feed 2 horses, 26 days, grading.....	19 50
December	Produce delivered	51 55
	Haul coal	52 92
	Haul laundry, etc.....	30 00
	Haul sand, etc.....	20 00
	Feed 4 horses, 25 days, coal, etc.....	37 50
	Feed 2 horses, 31 days, laundry.....	23 25
	Feed 4 horses, 10 days, haul.....	15 00
	Feed 2 horses, 26 days, grading.....	19 50
1917		
January	Produce delivered	104 00
	Haul coal	46 44
	Haul coal, laundry, etc.....	30 00
	Feed 4 horses, 23 days, haul coal, etc.....	34 50
	Feed 4 horses, 10 days, haul coal, etc.....	15 00
	Feed 2 horses, 31 days, laundry, etc.....	23 25
	Feed 2 horses, 15 days, miscellaneous haul.....	11 25
February	Produce delivered	3 09
	Haul coal	53 56
	Haul laundry and freight.....	30 00
	Feed 4 horses, 26 days, haul laundry.....	39 00
	Feed 4 horses, 13 days, haul laundry.....	19 50
	Feed 2 horses, 39 days, haul laundry, etc.....	21 75
	Feed 2 horses, 20 days, miscellaneous haul.....	15 00

March	Produce delivered	22 00
	Haul freight, etc.....	30 00
	Haul coal	61 28
	Feed 2 horses, 31 days, miscellaneous haul.....	23 25
	Feed 4 horses, 26 days, coal, etc.....	39 00
	Feed 4 horses, 12 days, coal, etc.....	18 00
	Wheat, barley and oats exchanged for flour, charged against farm in inventory.....	1,369 48
April	Produce delivered	77 11
May	Produce delivered	50 26
June	Produce delivered	106 54
July	Produce delivered	2,725 83
August	Produce delivered	4,902 75
	Rock, sand hauled.....	40 00
	Coal hauled	62 78
	Feed 4 horses, 28 days, haul sand, etc.....	42 00
	Feed 4 horses, 10 days, haul sand, etc.....	15 00
	Feed 4 horses, 25 days, haul coal.....	37 50
	Feed 2 horses, 12 days, haul coal.....	9 00
September	Produce delivered	1,394 72
	Haul coal	4 00
	Haul sand and rock.....	36 00
	Feed 4 horses, 20 days, haul sand.....	30 00
	Feed 4 horses, 13 days, haul coal.....	19 50
October	Produce delivered	5,060 33
	Haul rock, sand, etc.....	52 74
	Feed 4 horses, 24 days, hauling.....	36 50
November	Produce delivered	1,027 90
	Grading, etc.....	42 00
	Feed 6 horses, 19 days, grading.....	42 75
	Feed 2 horses, 8 days, haul rock.....	6 00
December	Produce delivered	5 90
	Hauling and work in sand pit.....	76 93
	Feed 10 horses, 13 days, in sand pit.....	48 75
	Feed 8 horses, 5 days, in sand pit.....	15 00
	Feed 4 horses, 2 days, in sand pit.....	3 00
1918		
January	Produce delivered	2 16
February	Produce delivered	10 46
	Hauling sand and rock.....	77 68
	Feed 10 horses, 28 days, hauling.....	105 00
March	Home products delivered.....	47 56
April	Products delivered	48 73
May	Products delivered	84 45
June	Products delivered	383 47
July	Products delivered	1,917 89
	Hauling coal, etc.....	67 00
	Feed 4 horses, 15 days.....	22 50
	Feed 4 horses, 17 days.....	25 50
August	Products delivered	2,843 46
	Hauling, etc.....	33 42
	Feed 4 horses, 22 days.....	33 00

September	Produce delivered	2,378 89
	Grading, hauling, etc.....	42 00
	Feed 4 horses, 28 days.....	42 00

Total Credits.....\$30,016 23

September 30, inventory of stock, machinery, tools, etc., on hand.....	\$9,945 03
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SUMMARY.

To total expense of conducting farm and garden operations for two- year period ending September 30, 1918.....	\$19,258 75
Net profits	20,702 51

\$39,961 26

Contra.

By value of farm products delivered and work done by farm teams and laborers, other than farm work.....	\$30,016 23
Stock and equipment on hand, charged to farm operations, as per inventory	9,945 03

\$39,961 26

Statement No. 4.

SHOWING MONTHS, DAYS BY MONTHS AND TOTAL DAYS, POPULATION BY MONTH AND TOTAL POPULATION, DAILY AVERAGE BY MONTH AND DAILY AVERAGE FOR PERIOD, EXPENDITURES BY MONTH AND TOTAL EXPENDITURES, PER CAPITA COST BY MONTH AND FOR PERIOD, COMMENCING OCTOBER 1, 1918, AND ENDING SEPTEMBER 30, 1918.

No. of Mos.	Months	Total Number Days in Period	Total Attendance for 24 Months	Daily Average Population for Each Month	Daily Average Population for Each Month	Expenditures for 24 Months, Supplies, Material and Services	Per Cap. Cost for Each Month, Supplies, Material and Services	Expenditures for 24 Months, Salaries and Wages	Per Cap. Cost for Each Month, Salary and Wages	Per Cap. Cost for 24 Months, Salary and Wages	Expenditures for Each Month and for the Entire Period	Per Cap. Cost for Each Month	Per Cap. Cost for 24 Months
1	1918 Oct.....	31	16,759	540.612	540.612	\$8,420.43	\$0.5025	\$3,153.38	\$0.1881	\$0.1881	\$11,573.81	\$0.8606	\$0.8606
2	Nov.....	30	16,386	543.524	543.524	8,475.17	.5095	3,123.00	.1904	.1895	11,598.17	.8690	.8690
3	Dec.....	31	17,052	550.387	546.291	8,479.80	.4050	3,136.10	.1839	.1872	23,171.98	.5922	.5922
4	Jan.....	31	17,092	550.387	546.983	8,479.29	.3710	3,227.55	.1885	.1878	20,787.88	.5588	.5588
5	Feb.....	28	15,891	540.678	547.483	8,496.69	.4443	3,381.06	.2106	.1887	37,606.72	.8784	.8784
6	Mar.....	31	17,543	565.903	550.620	8,490.35	.4220	3,371.55	.1923	.1835	47,826.52	.6155	.6155
7	Apr.....	30	17,067	568.900	556.037	8,496.66	.4567	3,393.38	.2023	.1949	61,694.42	.6500	.6500
8	May.....	31	18,316	590.838	560.477	8,534.04	.4823	3,522.53	.1930	.1932	73,348.82	.6653	.6678
9	June.....	30	16,870	562.333	560.681	8,531.05	.4365	3,411.86	.1862	.1925	12,167.17	.6321	.6321
10	July.....	31	17,388	560.903	560.703	8,531.13	.4281	3,418.95	.1806	.1911	10,722.91	.6352	.6352
11	Aug.....	31	17,534	565.612	561.158	8,531.11	.4251	3,418.95	.1768	.1900	96,253.90	.5407	.6192
12	Sept.....	30	17,495	583.166	562.926	8,531.11	.4055	3,424.49	.1867	.1902	105,661.50	.5687	.6151
13	Oct.....	31	18,429	594.483	565.434	8,531.11	.4215	3,424.49	.1841	.1902	115,636.44	.5807	.5807
14	Nov.....	30	18,220	607.400	568.384	8,531.11	.4148	3,424.49	.1827	.1894	122,468.51	.6117	.6117
15	Dec.....	31	18,978	612.193	571.356	8,531.11	.4029	3,424.49	.1741	.1883	140,812.85	.6042	.6042
	1918	457	261,110			106,250.76		49,172.36			164,870.12	.4250	.5012

SHOWING MONTHS, DAYS BY MONTHS AND TOTAL DAYS, POPULATION BY MONTH AND TOTAL POPULATION, DAILY AVERAGE BY MONTH AND DAILY AVERAGE FOR PERIOD, EXPENDITURES BY MONTH AND TOTAL EXPENDITURES, PER CAPITA COST BY MONTH AND FOR PERIOD, COMMENCING OCTOBER 1, 1916, AND ENDING SEPTEMBER 30, 1918.

No. of Mos	Months	Total Number Days in Period	Total Attendance for 24 Months	Daily Average Population for Each Month	Daily Average Population	Expenditures for 24 Months, Supplies, Material and Services	Per Cap. Cost for Each Month, Supplies, Material and Services	Per Cap. Cost for 24 Months, Supplies, Material and Services	Expenditures for 24 Months for Salaries and Wages	Per Cap. Cost for Each Month, Salary and Wages	Per Cap. Cost for 24 Months, Salary and Wages	Expenditures for Each Month and for the Entire Period	Per Cap. Cost for Each Month	Per Cap. Cost for 24 Months
16	Jan.....	31	10,115	616.612	574.231	5,538 17	.2806	.3952	8,243 55	.1086	.1872	8,781 73	.4592	.5824
17	Feb.....	438	290,225	618.035	576.629	110,744 93	.2206	.3850	52,415 91	.1934	.1874	163,160 84	.4196	.5726
18	Mar.....	516	17,305	620.354	579.087	3,915 78	.2271	.3757	3,348 34	.1734	.1866	170,424 96	.4008	.5623
19	Apr.....	547	297,530	618.468	581.135	55,764 25	.5512	.3855	3,835 12	.1859	.1865	7,702 21	.7871	.5720
20	May.....	577	316,716	618.838	588.057	110,027 80	.3474	.3883	59,099 37	.1709	.1855	13,679 58	.5183	.5688
21	June.....	608	335,815	609	584.277	129,256 19	.2809	.3783	3,450 90	.1634	.1844	9,946 13	.4443	.5627
22	July.....	638	354,469	601.006	585.055	135,938 71	.2288	.3713	65,813 97	.1720	.1880	201,752 68	.4008	.5548
23	Aug.....	669	372,769	603.741	594.375	141,072 10	.2950	.3651	2,886 15	.1506	.1880	209,872 22	.4246	.5481
24	Sept.....	690	391,403	614.6	595.219	145,338 56	.2097	.3597	3,025 44	.1776	.1822	217,164 12	.3873	.5419
		690	410,119			4,992 49			2,966 72			7,494 21		
		30	18,438			150,801 05			74,812 28			225,113 33		
						3,866 55			7,141 68			7,141 68		
	Totals..	720	423,557			\$154,167 60			\$78,067 41			\$232,255 01	\$0.3893	\$0.5419

Statement No. 5.

FINANCIAL STATEMENT—RECAPITULATION.

Showing Receipts, Disbursements and Balances of Public Funds for Period Commencing October 1, 1916, and Ending September 30, 1918.

	Appropriation and Balances	Disbursements	Balances
Maintenance, October 1, 1916, to March 31, 1917.....	\$78,289 74	\$61,094 42	\$16,595 32
Building fund, October 1, 1916, to March 31, 1917.....	66,655 57	66,655 44	11 13
Salaries and wages, April 1, 1917, to September 30, 1918....	95,505 00	58,688 77	36,816 23
Supplies, material and service, April 1, 1917, to September 30, 1918.....	166,115 00	111,871 82	54,243 18
Repairs and replacements, April 1, 1917, to September 30, 1918.....	6,800 00	5,995 20	804 80
Custodial annexes, April 1, 1917, to September 30, 1918....	80,000 00	2,232 00	77,768 00
Furniture, etc., April 1, 1917, to September 30, 1918.....	4,850 00	3,314 68	1,035 32
Piggery, barn, etc., April 1, 1917, to September 30, 1918....	15,000 00	14,041 12	958 88
Shop, annex, storage, April 1, 1917, to September 30, 1918....	10,500 00	10,490 92	9 08
Pipe, tunnels, etc., April 1, 1917, to September 30, 1918....	10,000 00	7,757 09	2,242 91
Filter bed, April 1, 1917, to September 30, 1918.....	700 00	.....	700 00
Shop machinery, etc., April 1, 1917, to September 30, 1918....	4,370 00	3,600 23	769 77
†Inmates—			
Balance.....	324 04	.....	.....
Received.....	3,311 21	2,913 58	721 63
‡Amusement—			
Balance.....	32 93	.....	.....
Received.....	669 48	358 86	343 62
§Miscellaneous—			
Balance.....	97 68	97 68	Disb.
Received.....	505 13	505 13	Revert
Totals.....	\$543,225 78	\$350,276 94	\$192,948 84

* Reverted to state treasury.

† This fund is contributed by relatives for clothing and incidentals not provided for by the state.

‡ Amusement fund is contributed by parents and friends for Christmas and other entertainments.

§ Received for dental work, sale of state property, etc.

(The state's fiscal term ends March 31, 1919, while the institution term ends September 30, 1918. Hence the balances shown are available until March 31, 1919, but cannot be reported until the biennial report of September 30, 1920, is rendered excepting the balances of \$16,595.32 in maintenance fund and 13 cents in building fund, which were unexpended March 31, 1917, and which reverted to the state treasury.)

Statement No. 6.

SHOWING CLASSIFICATION OF EXPENDITURES, TOTAL EXPENDITURES, PER CAPITA COST AND DAILY AVERAGE ATTENDANCE FOR PERIOD COMMENCING OCTOBER 1, 1916, AND ENDING SEPTEMBER 30, 1918.

This statement consists of expenditures from balance on hand September 30, 1916, for maintenance, and for salaries and wages, and supplies, material and service appropriation of April 1, 1917.

CLASSIFICATION	Oct. 1, 1916 to Mar. 31, 1917	April 1, 1917 to Sept. 30, 1918	Totals
Salaries.....	\$21,422 77	\$58,688 77	\$80,111 54
Subsistence.....	18,232 04	63,782 14	82,015 08
Clothing.....	2,649 93	7,510 34	10,160 27
Light, heat, etc.....	9,287 35	22,430 81	31,724 16
Farm and garden.....	1,541 58	2,896 22	4,439 80
Drugs and medicine.....	321 31	1,047 80	1,368 91
Repairs and improvements (paid from these funds).....	1,830 16	509 75	2,339 91
School supplies.....	117 77	227 19	344 96
Household.....	5,564 56	9,545 64	15,110 20
Office.....	168 72	491 89	660 61
Shop.....	174 72	395 99	570 71
Garage.....	15 37	1,133 77	1,149 14
Escapes.....		115 68	115 68
Miscellaneous.....	367 24	1,776 80	2,144 04
Total expenditures.....	\$61,694 42	\$170,560 59	\$232,255 01
Total expended during two-year period.....			\$232,255 01
Daily average attendance for period.....			595.219
Average daily per capita cost for period.....			\$0.5419
Expenditures for Extraordinary Equipment and Improvements—			
Improvements:			
Repairs and improvements, 1917.....	\$739 76	\$333 26	\$1,073 02
Salaries.....	2,756 85		2,756 85
Equipment:			
Household.....	3,066 75		3,066 75
Farm.....	1,038 66		1,038 66
Shop.....	64 65		64 65
Repairs and improvements.....		43 41	43 41
			\$8,043 34
Total expended for two years after deducting for extraordinary expenditures.....			\$224,211 67
Average daily per capita cost after deductions for extraordinary expenditures.....			.5245

Respectfully submitted,
S. C. WOODRUFF,
Superintendent.

STATE SOLDIERS' HOME AND COLONY.

Orting, Washington, September 30, 1918.

To the Honorable State Board of Control,
Olympia, Washington.

Gentlemen:—

Complying with your request and the provisions of the statute, I herewith submit the biennial report of this institution for the two years past, viz.: From October 1st, 1916, to September 30, 1918, inclusive:

The legislature of 1917 appropriated a total of \$158,100.00 for the institution for a modern hospital, slaughter house and feeding pens, clearing land, furniture of new hospital, auto truck, institution and colony maintenance, and also repairs on buildings, which has been nearly all expended with the following result:

A two-story, brick, modern hospital accommodating nearly one hundred people is now completed and is a credit to the State, to the architect, Andre C. P. Willatzen, and the Ferro Concrete Company, builders.

The feeding pens, of concrete and wood, and modern slaughter house are nearing completion.

Seven acres of the new cleared land was cropped this year and the remaining 13 acres can be cultivated when the stumps now blasted can be burned. \$1,722.69 of the appropriation of \$2,000.00 has been expended up to this time.

A new, modern kitchen has been built in place of the old unsanitary one that had been in use for many years and the barracks have been repaired by new plumbing, plastering and painting; a sanitary drinking fountain has been installed, coal bunkers built and a new smoke stack erected at the power house.

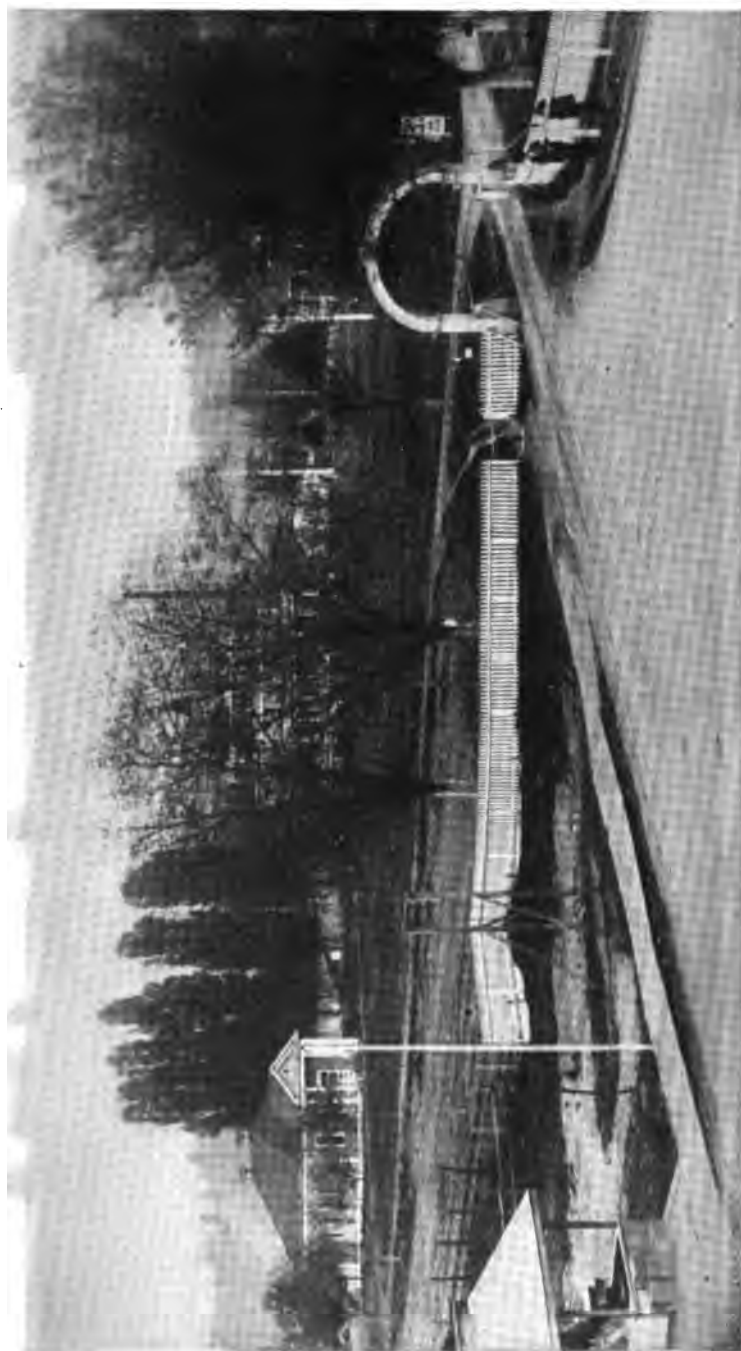
When the advanced price of all materials and food stuffs is taken into consideration, we think the results accomplished has been very creditable.

The health of our members is excellent for men of their advanced age, but very few are physically able to perform fatigue duty which is required, and unless we receive veterans of the war of 1917 we shall be obliged to employ outside help in a very short time to do this service in their stead.

The deportment has been good and very few cases of discharges for improper conduct has been made.

We call your attention to needed improvements, which have also been suggested in our budget, viz.: One concrete root house and one fire proof barracks suitable for the accommodation of one hundred men.

The pastors and laymen of the Puyallup Valley and Tacoma have conducted services in the Assembly Hall each Sunday at no cost to the State and have the thanks of the members.



ENTRANCE TO GROUNDS, STATE SOLDIERS' HOME.



Valuable contributions have been received from the following:

W. C. Ladd, Woman's Relief Corps, Vancouver;
 Ellsworth Woman's Relief Corps, Puyallup;
 Sheridan Woman's Relief Corps, Tacoma;
 Woman's Relief Corps, Shelton;
 Custer Corps, Tacoma;
 Woman's Relief Corps, Walla Walla;
 Webber Corps, Sunnyside;
 Spokane Dry Goods Company, Spokane;
 Whitman Woman's Relief Corps, Pullman;
 Woman's Relief Corps, Olympia;
 Woman's Relief Corps, Hoquiam;
 J. L. Reno, Woman's Relief Corps, Spokane;
 Sedgwick Corps, Spokane;
 Julia Dent Grant Daughters of Veterans, Tacoma;
 N. B. Page Woman's Relief Corps, Cashmere;
 Farragut Corps, Port Townsend;
 N. B. Hazen, Woman's Relief Corps, Ritzville;
 Woman's Relief Corps, Centralla;
 Woman's Relief Corps, Auburn;
 Garfield Woman's Relief Corps, Montesano;
 Mead Woman's Relief Corps, Yakima;
 Geo. H. Thomas Woman's Relief Corps, Olympia;
 Woman's Relief Corps, Olympia;
 Washington Woman's Relief Corps, Hoquiam;
 Woman's Relief Corps, Prosser;
 Mrs. Ricksecker, Tacoma;

who have sent gifts of cushions, pads, bibs, candy, nuts, raisins, fruits, jellies, canned fruits and wall mottoes, at Christmas of 1916 and 1917, and on other occasions.

The Soldiers' Colony at Orting continues to be as popular as ever. Soaring prices have made the amount of rations inadequate for husband and wife and we recommend an advance in the amount of groceries and provisions from \$7.00 to \$10.00 worth at wholesale prices. Also the privilege of the Home Hospital to those who are helpless and bedridden.

In conclusion, we thank you for your generous cooperation and assistance in this most trying and perplexing situation in which the State and our institutions have been placed on account of prices and labor problems by reason of the exigencies of war, and efficient manner in which you have overcome these difficulties, and do now pledge you the best service which any ability will permit of rendering.

STATE SOLDIERS' HOME, ORTING, WASH.

QUARTER ENDING	GAIN	LOSS			PRESENT AND ABSENT		
	Admission	Death	Honorable Discharge	Dishonorable Discharge	Absent with Leave	Present	Present and Absent
December 31, 1916.....	19	9	16	.....	184	277	461
March 31, 1917.....	29	8	81	.....	153	299	442
June 30, 1917.....	9	5	18	.....	189	239	428
September 30, 1917.....	18	2	15	.....	201	228	429
December 31, 1917.....	24	11	11	.....	190	241	431
March 31, 1918.....	22	3	20	.....	184	246	430
June 30, 1918.....	14	10	19	3	196	216	412
September 30, 1918.....	13	7	11	.....	200	207	407
Totals.....	189	55	141	3	1,497	1,948	3,440
Average per quarter.....	17.38	8.8	17.62	.....	187.12	243	430
Average present for biennium.....	.....	.....	.....	.....	.....	256.13	.....

Total membership October 1, 1916.....	467	60
Gained by admission.....	139	.....
Loss by honorable discharge.....	141	.....
Loss by dishonorable discharge.....	3	.....
Loss by death.....	55	19
Net loss during two-year period.....	.....	40

Mexican war veterans.....	1
Indian war veterans.....	6
Spanish-American war veterans.....	37
Civil war veterans.....	363
	407





NEW HOSPITAL BUILDING, STATE SOLDIERS' HOME.



WASHINGTON BUILDING, STATE SOLDIERS' HOME.

**AGES OF MEMBERS ADMITTED DURING THE TWO YEARS ENDING
SEPTEMBER 30, 1918.**

AGE	Year Ending Sept. 30, 1917	Year Ending Sept. 30, 1918	Total
41.....	2		2
43.....		1	1
45.....		2	2
49.....	1		1
52.....		1	1
54.....	1		1
58.....	1		1
60.....	1		1
64.....	1	1	2
66.....	2		2
68.....	1		1
69.....		3	3
70.....	4	4	8
71.....	4	5	9
72.....	3	3	6
73.....	8	6	14
74.....	6	9	15
75.....	3	2	5
76.....	5	7	12
77.....	5		5
78.....	3	6	9
79.....	2	4	6
80.....	5	4	9
81.....	3	4	7
82.....	1	2	3
83.....	2	1	3
85.....	1	3	4
86.....		1	1
87.....		1	1
88.....		1	1
89.....		1	1
92.....		1	1
96.....		1	1
Totals.....	65	74	139

**ADMISSION OF MEMBERS BY COUNTIES FOR THE TWO YEARS ENDING
SEPTEMBER 30, 1918.**

COUNTIES	Year Ending Sept. 30, 1917	Year Ending Sept. 30, 1918	Total
Clarke.....	1	1	2
Cowlitz.....	2		2
Douglas.....		1	1
Franklin.....		1	1
Grays Harbor.....	4	2	6
Kittitas.....	3		3
Kitsap.....	1	2	3
King.....	8	12	20
Lewis.....	3		3
Lincoln.....	1		1
Okanogan.....	1	1	2
Pierce.....	27	31	58
Pacific.....		1	1
Spokane.....	3	5	8
Skamania.....	1		1
Skagit.....	2	2	4
Stevens.....	1	2	3
Snohomish.....	2	5	7
Thurston.....	1	1	2
Walla Walla.....	1	2	3
Whitman.....		1	1
Whatecom.....		1	1
Yakima.....	3	3	6
Totals.....	65	74	139

**NATIVITY OF MEMBERS ADMITTED DURING TWO YEARS ENDING
SEPTEMBER 30, 1918.**

COUNTRIES	Year Ending Sept. 30, 1917	Year Ending Sept. 30, 1918	Total
Canada.....	2	3	5
Ireland.....	2	4	6
Scotland.....	1		1
Germany.....	2	4	6
Austria.....		1	1
Switzerland.....		1	1
England.....		5	5
Norway.....		1	1
Sweden.....		1	1
United States.....	58	54	112
Totals.....	65	74	139

CONDITION OF SOLDIERS' TRUST FUND.

Balance October 1, 1916.....	\$1,438 21
Received.....	5,365 90
Total.....	\$6,804 11
Disbursed.....	5,380 70
Balance September 30, 1918.....	\$1,423 41

DECEASED MEMBERS' FUND.

On hand October 1, 1916.....	\$1,524 66
Accrued interest.....	93 52
Total.....	\$1,618 17

WASHINGTON STATE SOLDIERS' COLONY.

Movement of Colony Population During the Biennium.

	Men	Women	Total
Population September 30, 1916.....	151	28	179
Admitted.....	45	29	
Discharged.....	43	9	
Died.....	30	2	
Gain.....	45	29	
Loss.....	78	11	
	28 loss	18 gain	
September 30, 1918.....	151	28	
	28 loss	18 gain	
	123	46	169
Total population September 30, 1918.....			169

Respectfully submitted,
ED C. WARNER,
Superintendent.





NEW WOMEN'S BUILDING WASHINGTON VETERANS' HOME

WASHINGTON VETERANS' HOME.

To the Honorable State Board of Control:

I herewith submit to you the biennial report of this institution for the period commencing October 1st, 1916, and ending September 30th, 1918.

Colonel W. H. Wiscombe resigned as Superintendent September 1, 1918, and I, John J. See, was appointed as his successor on that date. The work and necessities of this institution, all new to me, may excuse the overlooking of details in this report.

The conditions of this Home are practically normal except that the advanced age of the majority of the members keeps our hospital full to its capacity and increases the death rate to some extent.

The appropriation for maintenance for the present biennium of \$124,000.00, supplemented by \$65,000.00 from the National Government, making a total of \$189,000.00, figured on a basis of a population of six hundred at forty-three and one-half (.43½c) cents per capita, was made before the war was declared, but with the extraordinary advance in prices of everything pertaining to maintenance, we will be fortunate if we reach the first of April without a deficiency. This institution is almost entirely at the mercy of this advance in the price of commodities as we are practically non-productive, except for some small garden patches. We are also at a disadvantage in the matter of freight and transportation facilities.

The appropriations for this institution made by the last legislature for Capital Outlays were as follows:

For purchase of additional land.....	\$6,600 00
For additional boiler, auxilliary pump, etc.....	7,500 00
For women's building.....	25,000 00
Auto truck	1,000 00
Fire escapes	500 00
Office and vault furniture.....	300 00
Household furniture and equipment.....	5,000 00
Library	500 00
Repairs and replacements.....	5,000 00

The strip of land on the west side of the state property has been purchased from the Gaffner Estate for \$6,600.00, as per the appropriation, and it is a very valuable accession to this institution.

A Republic auto truck has been purchased. Thi struck has a carrying capacity of only three-fourths of a ton, and while it is a good truck and gives good satisfaction, its only fault is that it is too small. On account of the heavy grade to and from this institution, we should have a truck with a capacity of one and one-half tons.

Fire Escape.—A fire escape has been built on the outside of the west wing of the hospital building and the inside fire escapes have been changed and improved. Several more will be built as soon as labor can be obtained. It is almost impossible to secure help under the existing conditions.

Women's Building.—The women's building has been erected. It is one hundred and fifty-three feet long and contains forty-eight rooms. Eight of these rooms will accommodate two persons, making the total capacity fifty-

six. This is one of the best arranged and most comfortable buildings in this institution. It is a two-story building with an incline walk in place of a stairway. Each floor contains a comfortable sitting room and modern and sanitary lavatories. It is well ventilated and equipped with the latest improved steam radiators, and is neatly and moderately furnished.

Remodeling Kitchen.—The hospital kitchen has been torn out and a new kitchen built, and equipped with a new range, a new brick chimney, new sinks, tables, plumbing and an ice chest, and it is now a very convenient and well equipped kitchen. The approximate cost amounted to \$1,600.00.

The hospital dining room has been enlarged and improved and new floors have been laid in both dining rooms of select, well seasoned, hard maple. These floors, if kept well oiled, are perfectly sanitary and will last at least ten years.

Painting.—The large hospital building has been painted on the outside and calcimined and painted on the inside. The floors have been cleaned and oiled and the entire building renovated, and it is now in fine shape. Some painting has also been done on the Olympian building, but more painting is badly needed and must be done as soon as money and labor are available.

Women's Ward.—Owing to the increased number of feeble and helpless old ladies in our hospital, it became necessary to have a women's ward, and the linen room and operating rooms were torn out to make a place for this much needed improvement. The linen room was moved to the basement, and the diet kitchen across the hall. Partitions were torn out, a bath and toilet put in, and a women's ward was made and furnished to accommodate twelve of the most helpless women. This ward is always full, and is a great care, requiring extra night and day nurses.

Driveway.—The location of the women's building made it necessary to change the driveway on the west side and quite an expense was incurred in moving the fence, and clearing and grading for a driveway on the west side of the commissary building, which driveway will still have to be graveled.

Grading.—Also, several hundred dollars had to be expended in grading a small court at the upper end and around the women's building, where it is planned to put a cement curbing or retaining wall as soon as help is available. About \$100.00 was also used in grading by the power house. Considerable grading and work has been done at our cemetery. The driveways and roads have nearly all been regraded and graveled as far as we could with the available gravel and cinders.

Garden.—We have finished clearing and have placed under cultivation some small patches of garden and truck land and have them planted in potatoes, onions and other vegetables. Part of the ground was originally used for a park, but under the present emergency it was considered by us to be more valuable for garden purposes. In this connection, we have used about four hundred feet of drain tile. We also put in about seven hundred feet of new drains in the garden on the shore front, using mostly split cedar slabs, the old drains having rotted. There is a profit of twenty-five per cent from the garden up to date, and there are some late vegetables that have not yet been gathered.

Bakery.—A cement floor has been laid in our Bakery; the old floor became very unsanitary.

Power House.—Over \$1,500.00 was expended on the furnaces in the Power House, repairing the brick walls, installing new grates, etc. The larger portion of this expense was caused by changing from oil to coal, and I will say in this connection that the advance in price of coal, the extreme prices charged per day for barges and towing, and the much advanced prices for unloading, etc., made the cost of burning coal from \$20.00 to \$25.00 per day more than it did to burn oil. This matter was taken up with the Government Fuel Administrator, who personally visited us and viewed the conditions, and we were given permission to use oil. If we should again have to burn coal, some hundred dollars will have to be expended in building a short dock and coal bunkers far enough out in the water to enable barges to be unloaded at any tide.

In making recommendations and estimates for the next biennium, commencing October 1st, 1918, in view of the unsettled conditions that confront us at this time, it will be very difficult to make accurate calculations, or estimates, especially as to maintenance, salaries, etc.

The cost for maintenance during the biennium beginning April 1, 1919, will depend, of course, on the population and the cost of supplies needed for that period. It will not be safe to figure that the increase of pensions recently granted will reduce the population of the institution. The fact is that the increased cost of food, clothing, etc., as compared with what it was two or more years ago, will make it as difficult for a man now drawing \$40.00 to live outside as it was found to be two or more years ago when the limit was \$30.00 per month. There is, therefore, almost a certain prospect of the normal increase of population before us during the coming biennium as was found to be the case during the former ones. I think, therefore, that a conservative estimate for the women population during the next biennium would not be less than two hundred and fifty (250), and for men four hundred (400). Women members are at present increasing faster than men. This would mean a population of six hundred and fifty (650), which is about 50 more than the estimate of two years ago, when the maintenance was figured on the basis of a population of six hundred (600). Computing the cost at sixty cents (.60c) per capita, owing to the greatly increased price of goods, it would not be safe to figure less than about \$300,000.00 for the next biennium, less the government allowance of \$100.00 per year for the men.

This institution is becoming more and more a hospital proposition. As the members increase in age, it is natural that infirmities accompany. The present facilities of the hospital are not adequate. The utmost capacity of the women's ward is only twelve beds, accommodating twelve patients and these are constantly occupied. There are a number of cases that properly belong to a women's ward, but cannot be taken care of owing to the lack of ward room. The women population has materially increased during recent months; not less than fifty women are now waiting to be admitted to this Home. There is an urgent demand for a new unit to be added on the east side of the hospital to be exclusively devoted to the care of women patients. This should contain two new wards for women, together with double and single rooms for women patients who do not require ward care. This new

unit would, including the wards, together with the double and single rooms, afford accommodations for about eighty new patients.

The addition of a new hospital unit for women would mean, of course, the employment of three additional nurses to take care of it, that is, two practical nurses and one graduate nurse.

The present diet kitchen in our hospital cannot be said to be more than a kitchen for the dispensing of food, cooked in the main kitchen below and sent by elevator to the upper floor and wheeled to the diet kitchen and there it is distributed to about fifty trays and two tables, where about forty patients, who cannot well go to the lower dining room, eat their meals. It would be a distinct advantage if provision were made for a proper diet kitchen on the main floor of the hospital with a special cook installed. This would result in a greater variety of diet, giving a better chance to prevent improper food furnished to the patients.

I am trying to formulate a plan whereby the kitchen in the hospital dining room can be made a diet kitchen for those unable to attend the table of the hospital dining room, and to have all of the food for the two large dining halls cooked at the kitchen of the main dining room. An increase in the number of cooks would not be necessary if this can be accomplished, and the cost would be comparatively small.

I have already sent your Board an estimate of the necessary increase in the matter of wages to be paid to help who are carrying on the work of the institution. An exception was made in the case of compensation to officers. You are familiar with the character of our institution and the special work demanded in supplying the needs of its population, and can properly estimate the compensation that should be paid to its officers for the performance of their duties.

I desire to say at this point what I overlooked when referring to the hospital needs in the near future and that is: It will soon be necessary to provide an assistant physician to assist in doing the required medical work of the home and hospital. The demand for night work will increase with the increase of age, and patients are not merely inmates of the hospital but likewise of the various buildings outside. This would mean a physician's cottage, and I think it would be proper to provide for this improvement. The present quarters of the physician would be needed for the assistant physician.

In a recent communication, I referred to the necessity of a hospital matron as well as a steward to properly equip it for needed work. A matron of the hospital, apart from the matron of the institution, would find plenty of duties confronting her to keep her both busy and useful.

I think that not less than \$3,000.00 should be provided for extra help during the next biennium, as the exigencies of the situation might demand. Of course, this fund would not be used unless it is imperative.

Dock.—The Home dock will have to be repaired. It has been built over seven years and many of the piles are entirely eaten away by barnacles. Some have washed out and drifted away, the stringers are loose, and the flooring is in bad condition. I have condemned the wharf and posted notices warning the public against using this property. It will cost from \$1,500.00 to \$2,000.00 to put the wharf in good condition. If the state intends to change the location of the dock further down the shore, where it should



HOSPITAL BUILDING, WASHINGTON VETERANS' HOME.

have been built, now would be the proper time as the additional cost would only be the moving of the small warehouse and the lumber. I recommend this change as it would be more convenient for the institution, and a slip could be made from it to unload barges, which would be a great convenience and a large saving, if we should have to use coal in our power house. At any rate, it is the proper location for the dock for this institution.

Morgue.—A morgue is greatly needed. At present bodies cannot be removed from wards or rooms sometimes for many hours. All bodies should be removed from wards, or rooms, to an adjacent building without delay. The cost of such a building would be small.

Cemetery.—The cemetery will need some improvement. Further grading will have to be done, and the water mains extended.

Trestle Bridge to Cemetery.—The last two biennial reports have asked for a trestle bridge across the gulch to the cemetery. The road used now is up a bad and dangerous grade, which in the winter is almost impassable. On several occasions, accidents have occurred.

Fencing.—A new fence will have to be built on the west side of the grounds. The old fencing has in part been taken down and used to fence a pasture for the pigs, as we have the herd law and no stock is allowed at large. In my opinion, there should be a high fence on the west line, outside of the strip purchased by the state last year from the Gaffner estate. I recommend a wire, panel fence be built at least five and one-half feet ($5\frac{1}{2}$ ') high.

Roads and Walks.—The road from the east end of the main dining room around the commissary building at the rear end of the hospital to the brow of the hill becomes very boggy as soon as the rainy season begins, and impedes travel. It will have to be graded and graveled.

A concrete walk from the Washington building to the dining room is necessary.

The linen room during the rainy season is flooded with water to the depth of six inches. Some means should be taken to render this room water proof, or it will have to be abandoned during the wet season.

The valleys on the roofs of some of the buildings have become rusted, causing leaks in several rooms. Some of the down-spouts have almost fallen to pieces and must be replaced. The roofs of the Olympian building and the hospital building need repairing. Some of the flat portions of the roofs of the former building are leaking badly.

Painting.—I would also recommend that a reasonable appropriation be asked for painting. I think it is quite essential to the life of a building to keep it well painted. We could not do all the painting necessary the past year with the money available, on account of the extreme advance in prices of labor and material. The Olympian building should be painted on the outside and the greater portion of the interior is badly in need of a coat of paint. The floors of the hospital, Olympian and Washington buildings and of both dining rooms need painting. The power house and several other buildings will need painting within the next two years.

The establishing of a local telephone system is necessary to the expedient transaction of business around the Home. A switch board would be

placed in the adjutant's office and the stenographer could attend to the same. The cost of this local plant would be about \$600.00.

Water Works.—A new water main must be put in from the reservoir to the power house. The present main is made of wood and has been in use about nine years, and now requires constant repairing and attention. This wooden pipe should be replaced with a cast iron or steel pipe.

A concrete wall should be built on each side of the reservoir to prevent the banks from washing, which causes the water to become very muddy.

Auxiliary Pump.—At the last legislature \$1,000.00 was appropriated for an auxiliary pump and small dam in the creek below the power house, which was an ample estimate at that time, but with the advance in prices this appropriation is insufficient. A pump that could have been secured at that time for \$625.00 will cost at least \$1,000.00, which would be in excess of the appropriation. Therefore, the pump has not been purchased.

Lavatories.—The lavatories in the Washington building have been built and in use nearly nine years and are very unsanitary. The fixtures are old style, and the plan and arrangement not good. I would recommend all of the lavatories and bath rooms in this building be torn out and remodeled and made sanitary by installing new toilets and bath tubs. There is plenty of space to change the plan and make up to date lavatories at very little expense, and they will be much easier to keep clean.

Laundry.—The mangle in use at present was purchased second hand, and is worn out. It is impossible to do good work on it, and it should be replaced by a new one as soon as possible. A new tub is absolutely necessary for washing hospital clothing every day.

Existing conditions render it absolutely necessary that the salaries of the employees at this institution should be raised. As recited in the beginning of this report, the advanced age of the inmates renders it impossible for them to perform the labor necessary to keep the buildings and grounds in good condition; but very few of them are now able to perform the lightest labor over four consecutive days, while the greater majority are unable to do any work.

Another thought: I believe it would be a good idea to erect a building twelve by fifty-five, one story high, to be divided into three small and one large room, making a barber, tailor and shoe shop, which are needed, and the largest room provided with a range, making a kitchen, where these old housekeepers can prepare such food as they desire, which is not furnished at the general table, and they could and would preserve a great deal of fruit, materials for all of which they would furnish themselves, and do their own work. I believe this would serve the interests of economy.

The total amount of estimates is based upon the idea that the new unit suggested will be erected, rendering it necessary to employ a larger number of employees.

Table No. 1.

SHOWING LOSS AND GAIN FROM OCTOBER 1, 1916, TO SEPTEMBER 30, 1918.

	Men	Women	Total
Total membership October 1, 1916.....	479	274	753
GAIN—			
By admission and re-admission.....	229	136	365
Total.....	708	410	1,118
LOSS—			
	Men	Women	Total
By honorable discharge.....	77	33	110
By death	117	27	144
Total.....	194	60	254
Total on roll September 30, 1918.....	514	350	864
Gain biennial period ending September 30, 1918.....	35	76	111
Civil war veterans on roll September 30, 1918.....	503		
Spanish war veterans on roll September 30, 1918.....	11		
Total.....	514		

Table No. 2.

SHOWING MOVEMENT OF POPULATION OCTOBER 1, 1916, TO
SEPTEMBER 30, 1918.
MEN.

QUARTER ENDING	GAIN	LOSS		ABSENT AND PRESENT		
	Admis- sion	Death	Dis- charge	Absent	Present	Total Absent and Present
December 31, 1916.....	36	12	19	136	348	484
March 31, 1917.....	31	20	14	131	350	481
June 30, 1917.....	31	8	7	165	332	497
September 30, 1917.....	28	15	11	177	322	499
December 31, 1917.....	19	19	9	176	314	490
March 31, 1918.....	18	12	4	185	307	492
June 30, 1918.....	34	19	7	194	306	500
September 30, 1918.....	32	12	6	219	296	514
Totals.....	229	117	77	1,383	2,574	3,957
Average for quarter.....	28.62	14.62	9.62	172.90	321.75	494.62

Table No. 3.
SHOWING MOVEMENT OF POPULATION OCTOBER 1, 1916, TO
SEPTEMBER 30, 1918.
WOMEN.

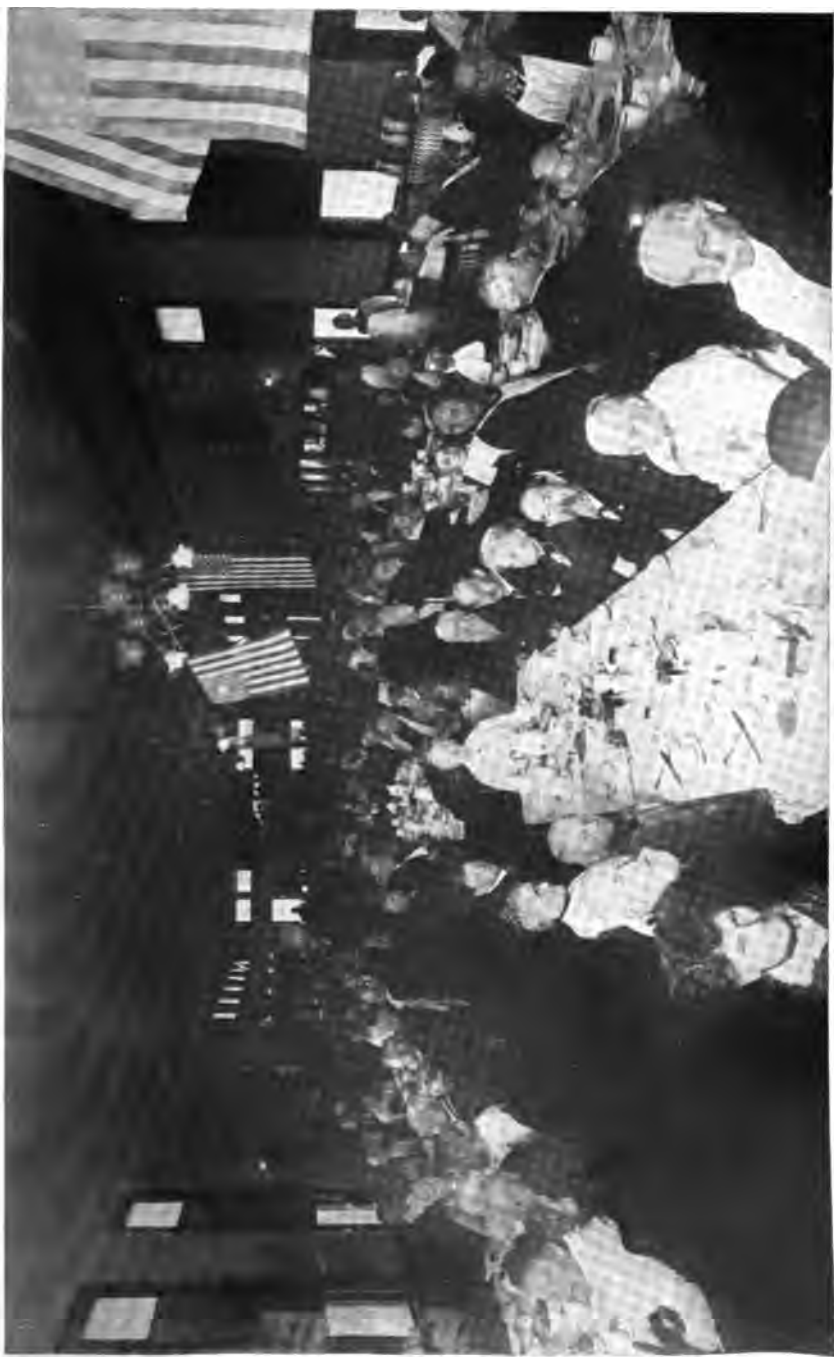
QUARTER ENDING	GAIN	LOSS		ABSENT AND PRESENT		
	Admission	Death	Discharge	Absent	Present	Total Absent and Present
December 31, 1916.....	13	3	6	94	184	278
March 31, 1917.....	16	2	8	95	189	284
June 30, 1917.....	15	3	4	122	170	292
September 30, 1917.....	16	2	2	125	177	302
December 31, 1917.....	14	4	7	125	183	308
March 31, 1918.....	16	8	3	138	175	313
June 30, 1918.....	28	3	3	170	165	335
September 30, 1918.....	18	2		206	143	349
Totals.....	136	27	33	1,075	1,396	2,461
Average for quarter.....	17	3.38	4.12	134.37	173.27	307.62

Table No. 4.
SHOWING NATIVITY OF MEMBERS ADMITTED DURING TWO YEARS
ENDING SEPTEMBER 30, 1918.
MEN

Countries	Number
United States	205
Canada	7
England	2
Scotland	2
Ireland	4
Germany	6
Poland	1
Switzerland	1
Denmark	1
Total.....	229

Table No. 5.
SHOWING NATIVITY OF MEMBERS ADMITTED DURING TWO YEARS
ENDING SEPTEMBER 30, 1918.
WOMEN

Countries	Number
United States	124
Canada	4
England	3
Ireland	1
Switzerland	1
Germany	3
Portugal	1
Total.....	136



DINING ROOM, WASHINGTON VETERANS' HOME.

Table No. 6.
AGES OF MEMBERS RECEIVED SEPTEMBER 30, 1916, TO
SEPTEMBER 30, 1918.
MEN

Civil War Veterans.	
Age	Number
66.....	1
67.....	1
68.....	6
69.....	6
70.....	12
71.....	16
72.....	26
73.....	17
74.....	27
75.....	14
76.....	18
77.....	18
78.....	14
79.....	17
80.....	6
81.....	8
82.....	3
83.....	1
84.....	2
85.....	2
86.....	2
87.....	1
89.....	1
90.....	1
Total.....	220
Average age, 75 years.	

Spanish-American War Veterans.	
Age	Number
42.....	1
43.....	1
44.....	1
52.....	1
54.....	1
59.....	3
60.....	1
Total.....	9
Average age, 52 years, 4 months.	

Table No. 7.

WOMEN ADMITTED DURING TWO YEARS ENDING SEPTEMBER 30, 1918.

Age	Number
50.....	3
51.....	1
52.....	1
53.....	2
54.....	5
56.....	2
57.....	3
58.....	4
59.....	4
60.....	4
61.....	1
62.....	5
63.....	5
64.....	5
65.....	7
66.....	7
67.....	8
68.....	6
69.....	3
70.....	8
71.....	6
72.....	7
73.....	7
74.....	6
75.....	6
76.....	4
77.....	2
78.....	2
79.....	3
80.....	3
81.....	1
82.....	2
83.....	1
84.....	1
96.....	1
Total.....	136

Average age, 67 years, 5 months.

Table No. 8.

**SHOWING ADMISSION OF MEMBERS BY COUNTIES FOR TWO YEARS
ENDING SEPTEMBER 30, 1918.**

Counties	MEN	Number
Asotin		2
Clarke		4
Clallam		1
Chelan		6
Columbia		1
Ferry		1
Grays Harbor		4
Island		1
Klickitat		1
King		52
Kitsap		53
Lewis		2
Lincoln		2
Mason		1
Jefferson		1
Pierce		28
Skagit		6
Snohomish		15
Spokane		17
Stevens		2
Thurston		3
Walla Walla		3
Whatcom		13
Whitman		4
Yakima		6
Total.....		229

Table No. 9.

**SHOWING ADMISSION OF WOMEN MEMBERS BY COUNTIES FOR TWO
YEARS ENDING SEPTEMBER 30, 1918.**

Counties	Number
Asotin	1
Clarke	2
Columbia	1
Chelan	2
Cowlitz	1
Clallam	1
Ferry	1
Grays Harbor	4
Island	1
Jefferson	1
King	37
Kitsap	29
Klickitat	1
Lewis	1
Lincoln	1
Mason	1
Pierce	18
Skagit	5
Snohomish	9
Spokane	11
Thurston	1
Walla Walla	1
Whatcom	3
Whitman	1
Yakima	2
Total.....	136

MEMBERS' FUND.

Balance October 1, 1916.....	\$513 24
Receipts	6,447 64
Total.....	\$6,960 88
Disbursements	\$6,082 25
Balance September 30, 1918.....	878 63
	\$6,960 88

DECEASED MEMBERS' FUND.

Balance October 1, 1916.....	\$2,310 91
Receipts	556 76
Total.....	\$2,867 67
Disbursements	781 65
Balance September 30, 1918.....	\$2,086 02

Respectfully submitted,
JOHN J. SEE,
Superintendent.





STATE SCHOOL FOR THE DEAF.

to the State Board of Control,
Olympia, Washington.

Gentlemen:

I have the honor of transmitting the sixteenth biennial report for the State School for the Deaf, covering the period from October 1, 1916, to September 30, 1918.

It should be stated that my work in connection with the school began about the middle of this period, on August 1, 1917, when I became superintendent in place of Mr. Thomas P. Clarke, who is now superintendent of the Arkansas School for the Deaf. I shall be able to speak with better knowledge herein of matters that relate to that part of the biennial period embraced in my incumbency, and what is said of matters antedating that time will necessarily be based only on records found in this office.

The attendance is increasing gradually. A total of 187 have attended the school during the biennial period. There were 134 pupils during the school year 1916-1917, of these 76 being boys and 58 girls. For the school year 1917-1918 there were 80 boys and 63 girls, or a total of 143 pupils, in attendance.

Counting the annual attendance on the basis of the first and second years of the biennial period, from October 1, 1916, to September 30, 1917, and from October 1, 1917, to September 30, 1918, the figures would be slightly higher, a total in fact of 152 for the first year and 164 for the second, but this is a somewhat fallacious way of counting, as in each of these totals the new pupils admitted in September of two successive years are included. To avoid this evident duplication it seems preferable to state the attendance for successive years on the basis of school years.

We should estimate our needs for the coming biennial period on the basis of 150 pupils the first year and 160 pupils the second year, or an average of 155 pupils for the two years.

The following figures indicate that we are progressing in line with all progressive schools for the deaf toward more and better oral instruction. Eighty-three pupils in this school were reported, on September 30, 1916, as being given oral instruction, out of 124 pupils then in attendance, or 65 per cent. There were then six oral teachers and four manual teachers. The following year, that is during the school year 1916-1917, 119 pupils received oral instruction out of a total enrollment for the year of 143, or 83 per cent.

Of the present number in attendance, 124 pupils, 103, or 83 per cent, received oral instruction, all but thirteen of that number being in all day oral classes. We now have seven oral teachers and three manual teachers, but are about to add another oral teacher, as nearly all our primary classes are already overcrowded and the number of pupils is growing.

The progress made cannot be shown wholly in figures, however. In addition the standard of requirements as preparation for teaching is being raised, this also in line with a general movement in that direction in practically all the schools for the deaf in this country. Our corps includes

teachers thoroughly trained and experienced in oral methods in several of the schools of the highest standing for efficiency in the country. Our manual teachers all hold degrees from Gallaudet College, Washington, D. C., which is a sufficient guarantee as to their thorough literary equipment. The changes in the teaching force are as follows: In place of Miss Sara McBride resigned, Miss Lydia Elmore came to us after two years' experience as teacher in the Indiana school, preceded by a two years' training course in the same school; in place of Miss Mary Kilgour, resigned, Mrs. Vida B. Kenyon of Everett, Washington, appointed just after completion of a year of training in the Central Institute for the Deaf, in St. Louis; in place of Mrs. John A. Fraser, resigned, Miss Emily Sauter came after having had several years' experience in the Nebraska and the Mt. Airy (Philadelphia) schools, besides a considerable amount of other preparation and training, including a course in the Muller-Walle School of Lip Reading for the Adult Deaf. On the resignation of Mr. Frederick Meagher, Mr. John Skoglund was made instructor in printing, and Miss Elsie T. Peterson, a graduate of this school and of Gallaudet College, was appointed a literary instructor in Mr. Skoglund's stead. During the fall of 1917 an unusually large number of new pupils were admitted, twenty-eight in all, twenty-three of these being little beginners, and the others coming from other schools and taking advanced standing here. Our beginning class became so large that it was necessary to divide it, and Miss Edith Winchester, a graduate of the State Normal, was selected to teach the new class thus formed.

On the resignation of Misses Moylan and Otis, at New Years, 1918, to accept positions in the Arkansas school, it was arranged to have our domestic science instructor, Miss Caton, take one of the classes in addition to her other work, and to fill the other vacancy we were able to secure Miss Cora B. Whitcher, who had previous experience as a teacher in several eastern schools.

Mr. John A. Fraser, our former steward, enlisted in the army in the fall of 1917, and Mr. S. D. Williams of Vancouver took his place, but after three months the latter resigned, and Miss Pearl Koogle of Chapman, Kansas has since that time acted as office clerk.

GRADUATES.

A total of nine pupils have been graduated or given honorable discharge during the two years, five of these in 1917 and four in 1918. Four of those graduated entered Gallaudet College and a fifth is studying with the hope of being able to enter this school.

As the field of employment readily open to the deaf is somewhat more restricted than for people with hearing, it follows that all lines which do seem practicable for them to enter should be thoroughly investigated, and that, during their school courses, they should be given every opportunity to fit themselves to enter those fields that hold out the best promises for them. Recent investigations would indicate that one of these is business training to fit a certain number of deaf persons of the right caliber for office work, banking and clerical positions of various kinds. They should have courses in business arithmetic, business forms, usages and etiquette, typewriting, operation of adding machines and so forth. A little start has already been made in this direction here and we hope to be able to go into such a course



STUDENTS, SCHOOL FOR THE DEAF.

much more thoroughly. Only the past summer one of our young lady pupils, who lives in this city, was employed during her vacation in the office of one of our business firms. Although with no previous experience and with almost no training, she gave good satisfaction to her employers and found the work congenial.

We are continuing and striving to improve the lines of trade and industrial teaching that this school, in common with the majority of other schools for the deaf, has been offering pupils for many years; namely, printing, to which linotype operation has been added during the past year, woodwork, shoe repairing, sewing and domestic science. Also the past two years much greater stress than formerly has been put on gardening, fruit raising, canning, and poultry raising, with the result that, without any pretensions at attempting to make our school self-supporting, we have raised all the fresh vegetables, prunes, plums, cherries, small fruits, root crops, sweet corn, beans, poultry and eggs and about half the potatoes that we needed. All summer long our domestic force and all fall our cooking classes are kept busy canning, canning, canning. We aspire yet to can just one thing, but to mention his name would be the rankest slang. Our boys, self-denyingly laying aside their aspirations for athletic renown, have willingly, even gladly, given their ball fields all plowed up and planted in war crops, till they hardly more than have outdoor play grounds enough left to play leap-frog. All these activities, in addition to their patriotic lesson, have afforded much excellent instruction in agriculture and its allied lines and subdivisions, for our boys and girls alike. This war is teaching us all many lessons that we needed to learn.

TEACHERS' ASSOCIATION AND COURSE OF STUDY.

In the fall of 1917 a teachers' association was organized for study and discussion of the betterment of our work in general, and during the past winter this association has been considering our course of study with a view to revising and improving it. We hope in the near future to have the fruit of these efforts appear in the form of a complete printed course of study, arranged in line with the latest and best thought in our profession on this subject. Both our literary and our industrial instructors are contributing to these labors, in order that the result may be a balanced, correlated course for the education of the mind and the hand alike.

It is impracticable for deaf pupils to attempt to follow identically the same course as in the public schools for the hearing in the corresponding ear-grades, but our effort should be and is to approach the course of the public schools as nearly as practicable, for the deaf child needs identically the same knowledge as the hearing one. The path of knowledge is a little harder for him, however, and he must toil upward along that path correspondingly more slowly.

The strides made by our pupils in a few years are truly remarkable, however, when it is remembered, as it must be, that they have to be taught, after entering school, a working English vocabulary, sentence formation, sound elements, speech and many other things which the hearing child has before he enters school at all. It has often been said with much truth that the normal hearing child from a satisfactory home environment is well edu-

cated before he starts to school. Our children are little sheets of blank paper at that stage, hence the responsibility of the teacher of the deaf is much greater as to what is written thereon and how it is written.

PHYSICAL WELFARE.

In general the health of the school has been very good during the portion of this period upon which our observation enables us to report. Our hospital remains a large part of the time empty and unused, which is as we desire it, but it is equipped and ready always, with a nurse in charge and a physician at call whenever needed.

The records of the school indicate that a somewhat extensive epidemic of throat trouble occurred in December, 1916, and also that month Ruth Cambell, a pupil sixteen years of age, from Prescott, Washington, was operated upon at St. Joseph's Hospital, this city, for appendicitis, but the operation did not afford the relief hoped for, and she died.

The year just past there were two other cases of acute appendicitis among our pupils, both occurring in October, 1917. The pupils, one being a boy and one a girl, were hurried to St. Joseph's Hospital and operated upon as soon as their parents could be communicated with and consent obtained. The operations were entirely successful, we are glad to report, and the patients soon able to be back in school.

During the past spring we had a visitation from two unwelcome guests at the same time, measles and chickenpox. In all we had thirty-six cases, the former and six of the latter, one pupil in fact thriftily economizing time by having both diseases simultaneously, and several other pupils, more conservatively inclined, had first the one and then, on recovering from that, the other. This is not stated for the purpose of furnishing entertaining reading but as a simple record of facts. The attacks were without exception light, however, in most cases very light, and not in any case was there a relapse or serious after effect. Pneumonia, which so often follows as an after effect of measles, was carefully watched for and guarded against successfully, for which we considered ourselves most fortunate.

In March this year our school physician inspected all of the pupils for adenoids and enlarged tonsils with a view toward eliminating or reducing the severity of epidemics of colds and throat trouble in the future. He reported that forty-one had enlarged tonsils or adenoids, or both, of sufficient gravity to need surgical attention. This represented just about 33 1-3 per cent of the total pupilage. The consent of parents of thirty-two pupils was obtained for operations, Captain Herbert Lieser, M. D., a specialist in nose and throat surgery, but now regimental surgeon of the 14th United States Infantry, having volunteered his gratuitous services for the purpose. Three physicians of the city, including our school physician, assisted, likewise gratuitously, and the thirty-two operations were performed at St. Joseph's Hospital, all but one of them on the same day and the one exception a week later. Excellent results were obtained from the operations. Besides the expected clearing up of tendencies toward colds, chronic tonsillitis and the like, which was realized very noticeably in a number of cases, another result, which we had not anticipated, appeared. The speech of several of our oral pupils began to clear up and improve.

various ways almost at once, so noticeably in one case that the teacher of this pupil found her task very materially lightened.

On March 31, 1918, William Kaszarda, a pupil seventeen years of age, from Pe Ell, Washington, died of pneumonia. He was one of those operated upon for adenoids and enlarged tonsils. The operation was successful and he was up and about, practically recovered from the effects, when some days later he caught cold, which developed into the above mentioned disease.

In May of the past year and about the same time the year previous the state dentist visited us and inspected the teeth of all the pupils, giving special attention to those found in need of it. In the interval between his visits any emergency cases of dental work among pupils were sent to dentists down town. This plan has in general worked out quite satisfactorily in keeping the teeth of pupils in good condition.

Victor Strebe, a little deaf and nearly blind boy, was brought to this school from Morton, Washington, in January, 1917, and a special teacher has been employed to give her whole time to his instruction since that time, following in the main the methods that proved so successful in the early education of Helen Keller and a number of other similarly afflicted but less well known children. Besides the very satisfactory progress in scholarship that little Victor has been enabled to make as a consequence in the few months he has been here, it is of special interest to note in his case that his eyesight has been improved quite noticeably and is still improving, largely due to operations performed on one of his eyes—the other is a glass eye—by Dr. J. F. Dickson of Portland, at St. Vincent Hospital in that city, one operation in June, 1917, and another the following September. This eminent specialist, whose services have been gratuitous, hopes for a still further improvement in eyesight through corrective glasses as soon as Victor's education has reached the point where a satisfactory test can be given to ascertain the kind of glasses needed. Does it occur to the reader that a very complicated problem in educational psychology is presented in the accomplishment of that test? It is one that cannot be solved in a day.

WINNING THE WAR.

Of many things we might speak—of the cheerful self-denial of pupils and others here in the matter of foods to which they have been accustomed but which they are now doing without for the sake of others in need, of the eager willingness of our girls to sew for the Red Cross and our boys to saw wood or run errands for the same organization whenever there is opportunity, of contributions to Red Cross, Y. M. C. A. and war relief funds of various sorts, of investments in Liberty Bonds, War Savings Stamps and Thrift Stamps—but in all these we are doing, just as other patriotic citizens throughout the nation and other liberty loving people throughout the world are doing, what we feel we can. Doubtless we all need to rise to yet higher planes of self-abnegation, and must do so before the world can be set free, so we claim no merit, offer no self-praise and desire no praise of others. Only one event in this connection will be mentioned in detail. A Red Cross benefit entertainment and sale was gotten up by our pupils, with some assistance from the teachers and officers, for Washington's birthday this year, and from it the sum of \$125 was realized and turned over to the local Red Cross for war relief.

REPAIRS.

During the past summer, and to a minor extent the previous summer, somewhat extensive repairs were carried on, so far as the funds available for that purpose permitted. Our old bakery oven, which for a long time has been unsatisfactory and inadequate for its purpose, was torn down and reconstructed along modern scientific lines by a firm of expert oven builders from Seattle, the interiors of the girls' and boys' dormitory buildings repainted and redecorated almost throughout, the east stairway and railings in the latter building rebuilt, new chairs provided for the large boys' study room and benches and tables built in the carpenter shop for the small boys' and small girls' play rooms. Likewise blackboards were provided in the two play rooms so that the little folks could "explode into writing" at a proper point of contact rather than all over the walls and woodwork.

In the main building—well, a start was made. The plastering, which was loosening and falling off in many places was patched, the fire escapes strengthened, braced and partially rebuilt, broken arches over doorways mended, the front porch painted, the front hallway, east and west stairways, several side halls, several school rooms, and private rooms, the hospital kitchen, pupils' dining room, employees' dining room, bakery, cook's pantry, art room, etc., redecorated as to walls and most of them also as to woodwork, broken places in cement floors were patched, the broken down and disused steps at the west end of the building torn down and an attractive little bungalow style storm porch built instead, a disused passageway newly demolished and the material in it put to better use, and—about the time, just when we seemed nicely started, the repair funds gave out.

THE NEW SCHOOL BUILDING.

The legislature at the last session appropriated \$40,000 for a new one-story school building and this will be completed and ready for use, we hope, some time the coming winter. It is an attractive building in type of architecture, being of fabric brick, with formal cut stone entrance front, a main hall containing an office, school supplies store room, twelve class rooms, sewing room, cooking school kitchen and dining room and an auditorium with stage, drop curtain and booth and screen for moving pictures. This building is an improvement that the school has much needed and it will be greatly appreciated when ready.

FUTURE NEEDS.

We have many needs. Our old main building, which is no longer to be used as a school building, should be replaced by an administration building of a modern, sanitary and fireproof type, to contain offices, store room, library, living and sleeping rooms for officers, instructors and other employees, dining rooms, etc., and also, either within or in close connection with it, a hospital ward, kitchen, bakery and cold storage quarters and power and heat plant. At present our facilities for all these purposes are patently inadequate. Such a building or group would cost, as nearly as we can roughly estimate, from \$50,000 to \$100,000, according to the type of building undertaken, and probably little if any less than the higher figure at the present high cost of material and labor. In view of war needs and the war basis on which this and all other states are operating at present.





seems wisest not to urge the expenditure of this large sum at this time, other than to go on record as to the need and as an indication of what we shall be compelled to ask and insist upon as soon as it seems wise and patriotic to do so.

Another need, which is even more imperative from an educational and administrative standpoint, is a separate primary building which would enable us to keep our beginning pupils and the other younger classes entirely separate from the older pupils. The two ages of pupils need entirely different diet, supervision, instruction and care, and above all such segregation would enable the little children to acquire the habit of speech and speech reading on the lips much more rapidly and effectively because they would not then learn and use signs from the older pupils to the extent that it is almost impossible to prevent with our present equipment. A child only learns effectively in school that which it puts into practice outside of the school room, and the satisfactory acquisition of speech by deaf children is no exception to this rule. Such a building as I would advocate for this purpose should be on the cottage type, but would cost the state little short of \$50,000 under present circumstances, and I feel that a request for that amount, however urgent the need of the building, should likewise wait till war conditions make it more practicable to consider.

There are other needs, however, for which I am compelled to request funds at this time. The new school building now approaching completion must be equipped and furnished, and cannot be occupied until further funds are provided for that purpose. I estimate that the sum of \$3,000.00 will be required, as follows:

Blackboards	\$725 00
Window shades	325 00
Ventilator registers	100 00
Stage equipment and moving picture screen....	150 00
Desks and kindergarten chairs for pupils.....	500 00
Tables and book cases.....	150 00
Desks and chairs for teachers and officers.....	500 00
Electric fixtures	250 00
Concrete walks to connect buildings.....	300 00
	\$3,000 00

A large amount of repair work and alteration will be necessary, particularly if, owing to war conditions, our present main building must be continued in use for some time to come. The roof of this building is leaking all over and it should be re-roofed at once. This with other roof repairs will require \$1,000.00. The old chapel, as soon as the new school building and assembly room can be occupied, will have to be altered and divided up into smaller rooms for sleeping or hospital use. This work, with the re-decoration and additional furnishing that will have to follow it, will cost an additional \$1,000.00. Then the ordinary summer repairs necessary to keep this and the other buildings in a sanitary and presentable condition will total not less than \$3,000.00, so that a total of \$5,000.00 for repairs and alterations will be required.

The school office is badly in need of modern office equipment. We have no fireproof safe nor filing case of any kind for our records. Such a combined safe and filing case as will answer our needs can be obtained

for \$300.00. This should by all means be provided, as, in the event of fire the total loss of our papers and records would prove seriously embarrassing, and even as it is the proper filing of these, in such a way as to be available for quick and ready reference, is an impossibility. No modern business office could operate with the equipment we have and keep out of bankruptcy long.

BUSINESS EDUCATION EQUIPMENT.

We need, besides, an adding machine. We need it very much, in fact, for our office work, but that is not why we are asking it. Mention was previously made in this report of our plans to give business training to a number of our older pupils. The department of office practice for which the deaf seem best adapted are adding machine operation and typewriting. To work out our plans for this course it is imperative that we should be provided with an adding machine, which will cost \$250.00, and two additional typewriters for practice purposes, which can be gotten for \$100.00.

Our automobile, which was a second-hand one when it came to us, after several years past its prime, and the monthly repair bills, which we have to pay out on it to keep it on the road at all, make an automobile a real luxury, though with us it is an absolute necessity. In spite of this it is frequently under the weather that it rests in the repair hospital while we walk back and forth the two miles between the school and town almost more frequently than we ride. This is excellent for the health but it cuts into the time of busy people. I recommend its retirement at the earliest practicable moment.

The teaching of farming and gardening is coming to be considered by all authorities a vital part of an educational system for the deaf. We have not sufficient land with which to undertake this effectively. In fact we have almost every available foot of our campus plowed up and in wheat crops now. This is good as a war measure, but, as a permanent arrangement to look forward to, it is not right, and it does not work for good discipline to deprive pupils of sufficient play grounds under normal conditions. There are several acres of land near the school that should be acquired before the expense of doing so advances. I recommend the appropriation of \$5,000.00 for the purchase of more land.

Our farm team is very old and totally unfit for active farm work. They should be disposed of at once. The sum of \$700.00 is requested for a new team, a new set of work harness, a disc cultivator, additional fencing and other equipment needed about the farm, orchard and poultry buildings to put them on a proper operating basis.

We shall need the coming two years, for library books \$200.00, for school text books \$300.00; for maps, globes, physics apparatus, hektograph, kindergarten material, sense training material, piano, drums, etc., for marching and rhythm instruction, and for miscellaneous school room equipment \$300.00; for cooking school, kitchen and bakery equipment, including a motor-run bread mixer, \$500.00. In our laundry we have only a two-roll mangle and one washing machine, but we do all the laundry work for the two state schools here, the School for the Deaf and the School for the Blind. Our two-roll mangle should be exchanged for a four-roll one that will do all pieces with once running through it, thus cutting down the labor, time and electric current required a half, and an additional washing machine.



NEW SCHOOL BUILDING, SCHOOL FOR THE DEAF.



should be supplied. Deducting the exchange value of our present mangle these can be gotten for \$1,000.00. This investment is necessary to keep up with our requirements or else additional labor will have to be employed in the near future. Our stair carpets and the rugs in a number of bed rooms are very old and wholly unfit to serve their purpose longer. We need \$700.00 to replace them and for additional bed room furniture and chairs. The sum of \$50.00, which we request for pictures to hang on the walls of hall ways, dining rooms and play rooms, is in no sense a luxury in a school where the pupils must gain their education and all refining influences through their eyes alone. The school now possesses so far as I can learn, just two pictures, one of them a photograph of a former officer and the other a crayon of three horses drawn by a former pupil years ago.

In our shoe shop, if we are to continue to give instruction in this trade to our pupils, we should have a proper equipment of modern power driven shoe repairing machinery. So far as I can gain information our graduates who took this trade while in school are not as a rule following it afterward, and the reason is not far to seek. I am authoritatively informed by expert shoe repairing men, who are making a success of the trade by adopting modern equipment and keeping abreast of the times, that any one who learned the trade by means of the antiquated hand cobbling methods and equipment we are compelled to use here would "starve to death" if he attempted to make a living on the same basis after leaving school. I recommend either that we provide proper equipment and adopt modern methods or else that the teaching of this trade be dispensed with and the funds now spent on it devoted to other lines of industrial education. An appropriation of \$1,500.00, I estimate, will be sufficient to provide such an equipment of shoe repairing machinery and other items of minor equipment needed in our various shops and manual training department.

We have an excellent gymnasium, but absolutely no equipment whatever for it. I request the appropriation of \$1,000.00 for an adequate outfit of physical training apparatus and anthropometric equipment for the accurate measurement of the physical conditions of our pupils. The need of these in a school like ours seems so obvious as to require no further demonstration than the bare statement of their absence.

On account of the increased cost of railroad tickets an increase of 25 per cent over the previous appropriation for traveling expenses of students from this school attending Gallaudet College, in Washington, D. C., is requested, or \$2,500.00. The past year we had six representatives in the college. If that average should keep up, this sum would barely suffice for the coming two years. Accompanying this report is a copy of a letter received from the president of Gallaudet College, which sets forth very clearly the need of this appropriation and the advantage to this state of making it.

In order to be able to command the services of the best instructors and specialists in our lines of work, it is going to be necessary under the increased costs of living to increase their salaries, I estimate, an average of at least 10 per cent. Likewise an average increase of at least 20 per cent in the costs of supplies of all kinds over the estimates of two years ago, makes a corresponding increase in our requests an evident necessity to every one familiar with the present condition of the market. We are requesting an average increase of 16 per cent for the total salaries and wages,

supplies and maintenance, including repairs, over the appropriation of two years ago, and excluding the very large item of repairs necessary here, it is an average increase of barely 14 per cent.

Respectfully submitted,

WALTER M. KILPATRICK,
Superintendent.





STATE SCHOOL FOR THE BLIND.

to the State Board of Control:

Gentlemen: I have the honor of submitting for your consideration the report of the State School for the Blind, at Vancouver, Washington, for the ninth biennial period beginning October first, 1916, and ending September thirtieth, 1918.

History of the School. The Legislature of 1886 established a School for Defective Youth including the deaf, blind and feeble-minded. In 1906 the 26 blind pupils were separated from the deaf (the feeble-minded having been removed several years previously) and the two schools were jointly administered though really independent. Legal separation was effected in 1913 with W. B. Hall as first superintendent, which position he held until his death two years later. The summer school, which opened in June, 1915, has been attended by thirty different adults and has made possible the equipment of several blind persons for independent support. The total enrollment in the regular school reached 62 during the biennium.

Health of Pupils. Continuing the work begun during the last biennium looking to a betterment of sight and general health in the pupils, the recommendations of Dr. Ralph A. Fenton and Dr. J. Frederick Kiehle, specialists of the Medical School of Portland, were carried out and many pupils were treated and operated upon. There were no charges made by the doctors and but a nominal fee by the hospitals, so the management feels very grateful to these splendid men for their efforts in behalf of the children of the school.

Improvements. Although the administration building was erected at the close of the preceding biennium, yet the actual proof of its adequacy belongs to this as does the report on its completion by the addition of the \$17,000 kitchen which completes the unit. This kitchen building contains the kitchen proper, bakery with brick oven, pantries, vegetable room, refrigerator room, dining room for employees and the quarters for cooks. The arrangement of the kitchen is such that no food smells ever penetrate to the school rooms and yet it is near the dining rooms, which are in the main building.

The shop, completed during April of 1918, is a one story structure providing room for all industrial work offered the boys. It is near the boys' cottage and apart from the main building. The boys are very happy in their new building as it is the first time since the establishment of the school that the boys' department has been properly housed. This shop was planned with a view of adding a second story if the need should ever arise. The building cost \$10,000 and adds much to the plant.

The wrecking of the old main building removed a blot from the landscape and a menace to the entire plant. This old building had stood for 30 years and had answered many purposes. It was with a sense of great relief that we saw it reduced to ruin and the debris cleared away.

The buildings now on the grounds present an impression of pleasing permanence as they are fire-proof and conform in color and design.

The expenditure of \$10,000 for additional land nearly doubles our area and gives us thirteen acres of ground. With one of the purchases there was acquired a good eight-room house in excellent condition, and modern, which with some equipment can be used as a cottage for the larger boys.

Three fine rooms have been fitted up in the basement of the main building for a girls' industrial department, and hand ironing and cooking were offered the girls, with a special teacher placed in charge.

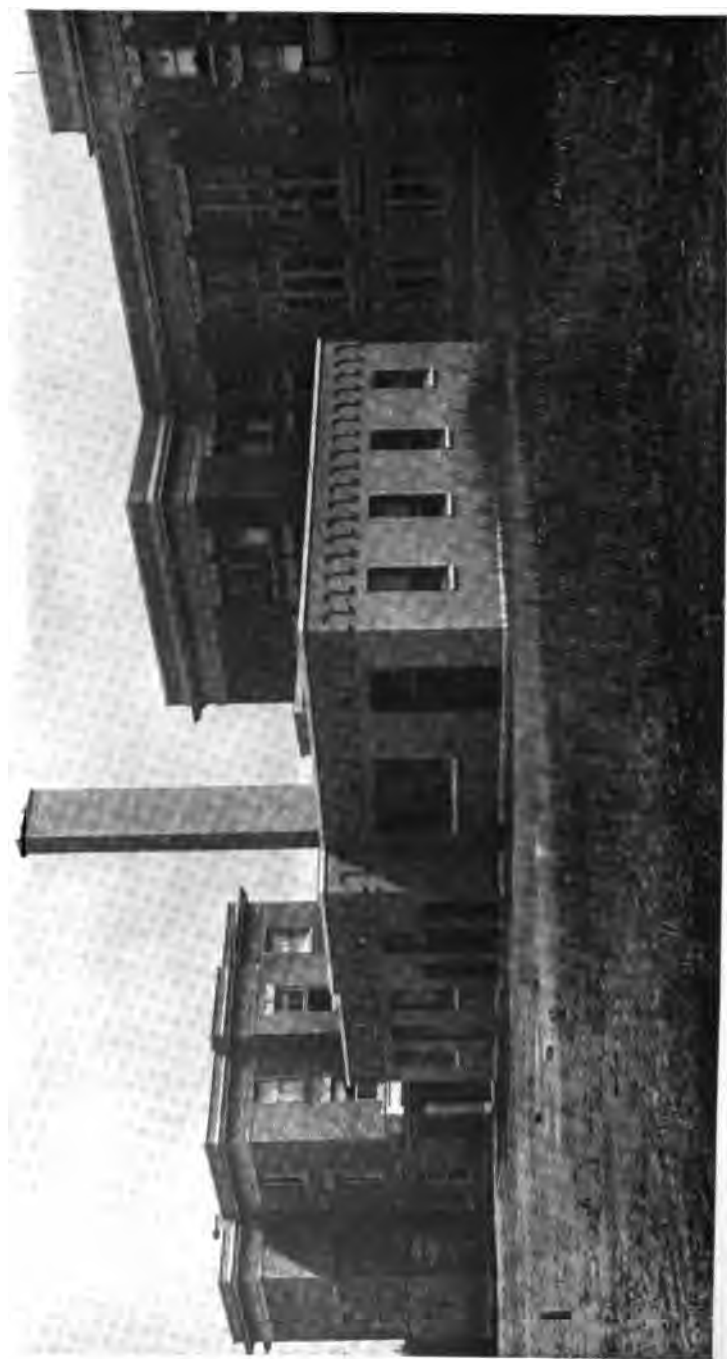
Several hundred volumes have been added to the library. Much sheet music, two violins, and a grand piano have been added to the musical department.

During the past biennium there have been attending the Vancouver high school six young people resident at the state school; two in each of the following years: freshman, sophomore, and junior. All preparation of lessons has been taken care of by teachers in the school, as the texts used could not be procured in Braille.

Although this arrangement involved much work we feel that the contact with the outside world is very helpful, and aids the blind student to easily adjust himself to the ways of the sighted folk among whom he must live and work. The competition and merited appreciation thus open to him is very valuable. However, because of the location of the city high school, two miles distant from the State School, I am convinced that the study of high school age should remain in the residential school until ready to enter the junior year, thus enabling him to pursue his musical and industrial work along with his first two years of high school. This cannot be done under present conditions owing to time required for walking to and from school. It is highly important that music and hand training be not neglected in a blind student. If he does not get the training while in the residential school where equipment is provided, he will never get it. Therefore, I earnestly recommend that one extra teacher be added to the faculty to take care of the high school work required in the freshman and sophomore years of the Vancouver high school; thus qualifying our pupils who desire it, to enter the junior year as regular students and at the same time sacrifice their musical and industrial studies for pure literary training.

Teachers. Although there have been several changes in the teaching force during the last biennium, in every case care has been exercised to secure the services of well equipped and experienced workers in order to maintain the high standard set several years ago in this school. There have been among the teachers a spirit of cordial and loyal support which has had a great influence in stimulating the pupils to high endeavor. During the last year of the biennial period there has been a marked increase in that cheerful and self-denying spirit which the war has stimulated throughout the nation. The school was offered, in various ways, opportunity to show its willingness to respond in gifts and service. The following report gives the three kinds of service emphasized as an expression of patriotic fervor. The report in garden work could not have been possible had it not been that the teachers and pupils cheerfully assumed duties about the care of the building, which released regularly paid employees for outside work. Included in the Red Cross gifts is the amount realized from a benefit program given by the pupils.





REPORT OF WAR WORK.

Bonds and stamps.....	\$4,105 00
Gifts to Red Cross.....	850 00

Work for Red Cross.

sweaters	2 scarfs	10 knitted squares
pairs socks	4 helmets	50,000 gun wipers
pairs wristlets		

Vegetables Raised, 1917.

2,700 pounds potatoes	800 pounds beets
2,000 pounds carrots	800 pounds beans
1,500 pounds cabbage	

Vegetables Raised and Canned, 1917-18.

630 quarts string beans	258 quarts beets
22 quarts peas	200 quarts corn

Social Life. The same care has been exercised during this biennium has been the custom here for years—to provide wholesome and beneficial day. Parties on Saturday night have been planned every two months with committee of teachers in charge. Owing to the open winters and strong drive of out of doors manifest in all children, "hikes" have been very popular. A day in the woods with lunch of sandwiches, weiners, and apples to be eaten around a fire is a very wholesome and profitable diversion. A system of merits and de-merits has been used for the past two years, with the awarding of some especially desirable nature as a reward for all who attain a place in the honor class. This honor class is composed of those who earn 200 merits and keep them until the close of school. The first outing was an automobile ride up the wonderful Columbia Highway to Multnomah Falls, where dinner was served to all. The party was composed of 58 persons, and the school physician, Dr. M. U. Leiser, was host.

The next year the Portland Railway, Light & Power Co. gave free transportation to all for a day at the Oaks Park on the Willamette River. Special concessions at the amusement park were open to the children and their attendants. The party numbered 60, and a picnic dinner was sent from the school. The memory of the happy time had that day will remain with the children for many years. The only sadness in the otherwise perfect day was the fact that nine children failed to reach the honor roll and thus were compelled to spend the day at regular school work. Although the outing forms a strong incentive to effort for service, it is not the chief benefit from the system. Habits of neatness, punctuality, courtesy, and diligence are being fixed which, we trust, will bring many happy days in later life.

NEEDS OF THE SCHOOL.

Maintenance. At present there are 60 pupils enrolled and it is not unlikely that the attendance will reach 70 by the close of the next biennium. The average attendance should be 70 the per capita, according to the last year of increased prices would need to be reckoned at \$1.27 for 65 days. This would make the appropriation approximately \$65,000.00.

Pipe Organ. It is easy to understand that to the blind the world of sound is one of great profit and pleasure. Music is a study which requires years of diligent effort to bring to perfection. Because other avenues of expression are closed to the blind child, he finds great inspiration in this

mode of expression in which he can compete with his sighted brother. Many instances might be mentioned in which the opportunity to use organ became to the blind student a means of making for himself enviable place in the world, both as an entertainer of others and as independent wage earner for himself and those whom he loves.

The expenditure of \$2,500.00 for an organ suitable to fill the auditorium in the administration building would make it possible to bring to the school artists of ability to perform for the children, thus creating a musical atmosphere in which the blind child finds his keenest pleasure. There today, in our school, several children who show unusual musical gifts and the installation of an organ might be the means of giving to the world a second David Duffie Wood.

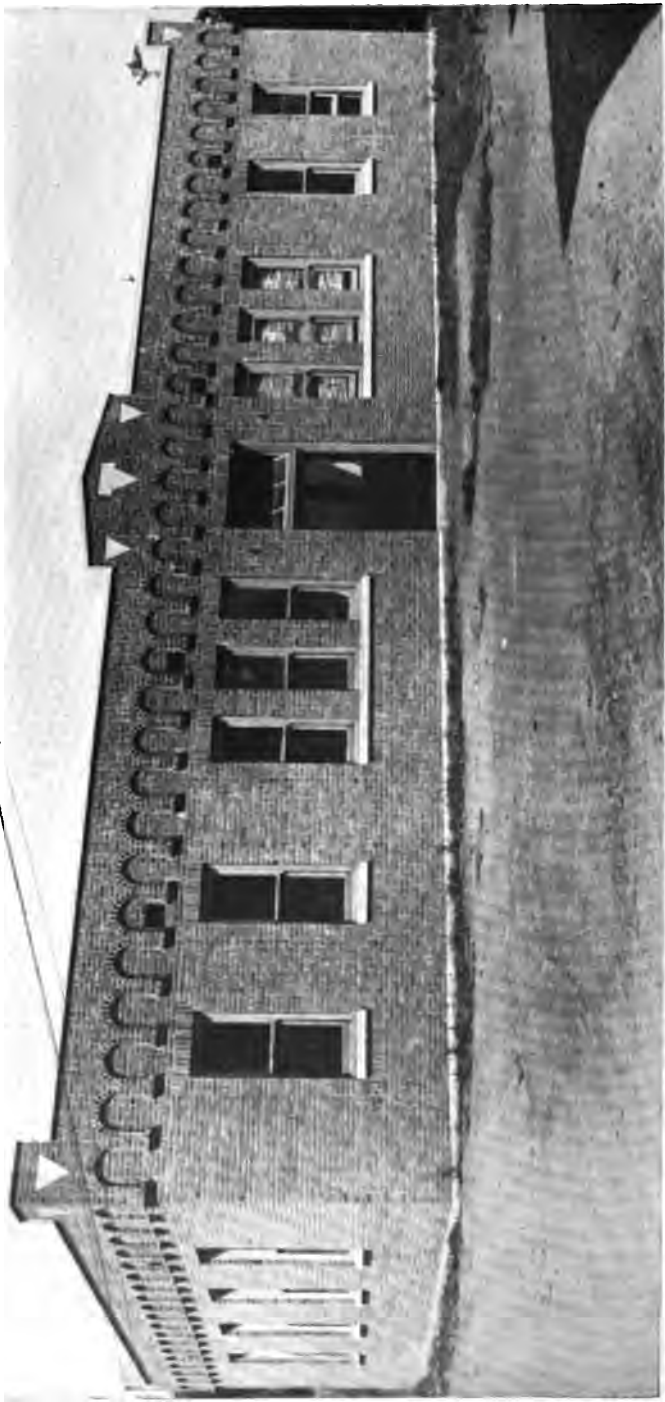
David Duffie Wood was a little blind boy of poor parentage who at five years of age entered the school for the blind of an eastern state, ultimately became one of America's greatest organists. He was held a high salary in a Philadelphia church for many years, was a teacher of music and was pre-eminent as an interpreter of the works of the masters.

Swimming Pool. Blindness is nearly always accompanied by a defective physical condition. For this reason it is very important that the school for the blind be equipped with every device for the development of a strong body. Swimming is one of the very best of exercises for a blind child because it develops the whole body; while the exercise is taken in an element that makes a tremendous appeal to the sensitive touch of the sightless. The management of every school of recent re-construction has added a pool for swimming and speaks in highest terms of its value as a developer of strong physical powers.

In the basement of the administration building is a fine plunge 58 feet all roughed in. It would cost approximately \$5,000.00 to finish it and when completed the Washington School for the Blind would be in a class with the best in the country.

Field Agent. There is one way in which a blind man may render splendid service to his state. This is in a position known in other states as a field agent. Just as our public schools have their school visitors; big department stores their social workers; our hospitals their follow-up agents; so the right kind of a blind graduate from our school employed on a regular salary could be of incalculable value to the blind of this state. His work would be to visit parents, making suggestions and explanations to follow up discouraged pupils and encourage them; to find the young blind and report them to the superintendent, and to locate the adult blind and give them the larger outlook of a trained worker. Under the supervision of such an agent, the school might become a distributing center of material for the blind worker who has been trained by the state, but because of inability to procure material except at exorbitant rates is unable to accomplish much in the way of self-support. The enlargement of this plan includes the home teacher, who is always a blind person, preferably a woman, who goes into the home, and there teaches the helpless child that life is not necessarily useless because sight is gone. In view of the possibilities of the field agency work, and the benefits to be derived from it, I recommend that \$2,000.00 be appropriated for a field agent, to work under the direction of the superintendent of the School for the Blind.





Library and Musical Instruments. By reading, the blind child acquires nearly all of his knowledge, hence it is very necessary to have at his disposal a well selected library of embossed books of literature, history, and fiction. Facility in reading is acquired only by the reading of many books. To induce the child to acquire this faculty he must have attractive and suitable books to stimulate his interest. When we consider that a copy of *David Copperfield* costs, in print, ninety cents, while, in Braille print it costs \$21.00, we begin to realize that a library for the blind requires an outlay of considerable money, to secure even a small collection of books. The children who enter the school are given instruction for a period of time in instrumental music. Where taste and talent warrant it, especial attention is given to develop this, to a blind child, supreme gift. We have now ten pianos, one of which is always in use for the teacher hearing lessons. We shall need several new pianos soon. Thirteen hundred dollars should be provided moderately for books and musical instruments for the next biennium.

Grading and Walks. A well graded yard is a very great necessity for the children to play upon. Their natural hesitancy is much augmented if they feel that there is danger of stumbling. Our yard is in need of much grading in, so that walks may be permanently laid for the guidance of the children about the grounds. These improvements are greatly needed to provide for the safety of the children, and to induce them to spontaneous play. I think \$1,800.00 would cover these expenditures.

Higher Education. In June 1916, we graduated a class of six young people from our grammar school department. These young folks are attending the Vancouver High School. Our teachers at the school read their lessons to them, and in every way encourage them to persist until graduation. It is the acknowledged right of every child in America to have an opportunity for an education. The blind child is more restricted than any other for he cannot secure books printed in the subjects he pursues in college, and must depend upon the kindness of some one to read to him. I therefore recommend that an annual appropriation of \$300.00 per pupil be made for any blind graduate of an accredited high school of Washington, who wishes to take a college course. This sum will but furnish him with a pair of eyes.

Chicken Raising. During the biennium there has been an accurate record kept of the expense incurred in the keeping of our small flock of 10 hens. From Jan. 1, 1918, to Aug. 30, 1918, they have produced 1256 dozen eggs with a market value of \$555.38. The cost of their keep during these nine months was \$215.10, making a net gain of \$340.28.

Chicken raising can be profitably conducted by a blind person, as has been clearly demonstrated, but it should be taught, in the school, in the small unit chicken house, and not in a large house such as we are now using, where a sighted person is required.

The Colorado School uses a small two unit house, which will hold from 10 to 15 hens and each unit is given to the independent care of a pupil or two for a given time. In this way a close check is kept on material used, results obtained, and responsibility incurred. I recommend that an appropriation of \$800.00 be made to supply us with four houses, each having

two units, thus providing facilities for teaching chicken raising on scientific basis.

Wood House and Garage. An appropriation of \$800.00 would provide a garage and house for split wood; both of which are badly needed.

Weir House Equipment. With the purchase of land during the biennium there was acquired a good 8-room house which is in excellent condition, except for heating facilities. I recommend that \$600.00 be appropriated with which to equip this house as a cottage for large boys. No arguments need be presented to convince any one familiar with problems of adolescence that little and big boys should be housed in separate buildings.

Other Industrials. To properly carry forward the work in the industrial departments of the school, an appropriation of \$2,630.00 will be necessary, owing to the greatly increased prices required for all materials.

Acknowledgements. To His Excellency, the Governor, for his graceful recognition; to the honorable Board of Control, for their cordial support and wise counsel; to the kind friends of the institution—especially Dr. J. Frederick Kiehle and Dr. Ralph A. Fenton for their generous service in behalf of the children of the school who needed expert medical attention; to the people of Vancouver who have so often made possible some pleasure outside the school; to the loyal employees, who by cheerful acquiescence, have made the self-denial of the war period a sacrament of service; to the dear children who have joyously given of their slender means and their leisure time, that the gift of love sent from the school might be as large as possible, from my heart I wish to express a deep and abiding gratitude.

Respectfully submitted,

SADIE E. HALL,

Superintendent.





CAPT. LEE CLARKE LEWIS,

Adjutant First Battalion, 47th Regiment Infantry.

Born April 4, 1892, at Jetmore, Kansas.

Died July 31, 1918, near Chateau Thierry, France.

He laid down his life, not alone for his friends, but for the world.

STATE PENITENTIARY.

to the Honorable State Board of Control:

I have the honor to submit herewith certain detail memoranda sheets covering the operations of this institution for the 9th biennial period ending September 30, 1918. The data included in these various statements, statistical tables, and accounts showing cost, character of expenditures, etc., naturally arising in the conduct of a prison, and other historical information pertaining to the personnel of inmates, is presented with the hope that perhaps it may be helpful in determining some of the many problems necessarily arising in the conduct and maintenance of our state penal institutions.

During the past two years it has been a problem how to live within our means. Consequently, every phase of the question concerning the housing, care, clothing and feeding of prisoners, has necessarily been considered in an endeavor to keep our expenditures within a pre-war appropriation for prison maintenance, by overcoming the advance cost of all materials and supplies. By consuming everything within the prison in the way of surplus stores heretofore carried, exercising economies in every way pertaining to clothing and feed, to the point of being almost parsimonious, we hope to avoid creating a deficiency—that is, we hope to exist and yet keep within the appropriation provided for the two years ending March 31, 1919.

The comparative costs of our state institutions have usually been made upon a per capita basis. That is, the total expenditures are divided by the average population and again divided by the time, in years, months or days as desired. Figuring in this way, a large or small population materially affects your per capita, because all overhead costs are practically the same, regardless of population. If figured in this manner, our per capita for the period covered in this report will necessarily show high, on account of high living costs and a reduced prison population.

However, it appears to be only fair, inasmuch as a very large proportion of our prison population has been fed and clothed to make it possible for them to work in the jute-mill, that the net earnings of the jute-mill arising from the prisoners' labor for this biennial period be applied to a reduction of his cost of keep. By thus deducting the mill net earnings from total prison expenditures, we show a daily per capita net cost to the State for the keep of each prisoner of 28 1-3 cents. (Refer to Table 8 Jute-mill Operations.)

The daily average number of inmates for the past two years has been \$45.28, which at 28 1-3 cents per day for two years makes a cost in round numbers of \$133,460 to the state or a yearly cost of maintaining the penitentiary of \$66,730. In this computation no deductions have been made for depreciation of buildings and wear and tear of machinery. In addition to the above there have, however, been some small expenditures chargeable as "capital outlay," which under our system of accounting is not included in the above figures. This favorable biennial showing is due largely to war profits from the jute-mill. The Federal Government's liberal allowance to the grain grower for sacks on all sales of sacked wheat, gave us a good

price for the bag and nearly a free bag to the wheat grower. This allowance for sacks by the Government will no doubt terminate with the war and when we return to a pre-war manufacturing basis, the jute-mill cannot be counted upon as so profitable a producer for the State as during the past two years. I have covered the future of the jute-mill phase of this subject matter in my former reports, and there are apparently no reasons at hand to change my opinion at this time.

During this biennial we manufactured 2,338,804 bags and sold 2,112,880. The value of manufactured fabrics including inventory September 30, 1917 was \$374,747.26, while costs of jute and jute-mill operation expenditures amounted to \$252,149.57, leaving a profit balance of \$122,597.69. This profit is without deductions for depreciation of plant, etc.

The contract price for grain bags for the harvest season of 1917 was 10½ cents each and for 1918 season 19 cents each, all f. o. b. Walla Walla. About 55,000 sacks were sold after this season's contracts were filled at 19 cents each, f. o. b. Walla Walla, which was 2 cents less than the local Walla Walla price. While there was much apprehension during the early part of 1918, that there would be a shortage of bags for harvest requirements and consequently a great rush to make contracts with the State, we closed the biennial on September 30, 1918, after filling all demands upon us, with 370,000 bags on hand, which can be sold or carried over for 1919 harvest use.

The war prices of sacks have very materially hastened the bulk shipment of grain in this state. This manner of shipment among the wheat growers has been increasing in favor for several years past, and is now assuming such proportions that the number of bags required to handle a crop is rapidly lessening and the present indications are that the purposes for which the jute-mill was established have been largely served.

Inasmuch as we have two complete mills or sets of machinery and the north half of the mill has not been operated for several years and the probabilities are that the demands for its operation will not call it into use, even if we had the labor to operate it, which would require an increase of 350 to 400 prison population, I would recommend the sale of this unused complete set of machinery, and the present time should be an opportune one to make such a sale. If it can not be used it is only deteriorating in value by remaining idle. This equipment referred to is the original purchase of jute-mill machinery by the State, and while not new, it is workable and might be of supplementary value to some of the larger mills in India or elsewhere.

The removal of this equipment would provide much available first class floor space for other industrial purposes.

Fabricating Woolen and Cotton Goods.—I would recommend that you request a sufficient legislative appropriation to purchase a set of fabricating machinery for producing woolen and cotton materials, to be of a capacity to supply the requirements of the population of all the state institutions, say 6,000 people. Investigation of this subject shows it to be a perfectly feasible and economic proposition, to standardize such materials and to manufacture practically everything required by the State in this line, for its several institutions, at this place. To do this would probably not require the daily services of more than 20 to 25 men, and only a small floor

space, easily made available in our present mill, without detracting from our present jute-mill capacity. The actual operation of this small initial cloth plant would determine the practicability of the utilization of some of our present unused equipment in weaving, say special fabrics for export purposes, if not desired for home use. I hope to present you later, supplemental to this subject, a report made by a competent and experienced man in woolen and cotton manufactures, covering the practicability of engaging in this work here for the purposes stated.

Discipline.—With but few exceptions the inmates of the institution have shown a desire to observe the rules and regulations of the prison. They very generally realize that rules are made for their benefit and I am pleased to report that the prison conditions covering their observance are now very satisfactory.

During the very hot summer month of August, 1917, after the mill had been shut down for several weeks for repairs, thus compelling confinement of prisoners in the cells, a very violent demonstration approaching riotous procedure occurred, lasting for two days and nights. Just for what reason this occurred or whom was benefited thereby, has not yet been determined.

However, prison life, occasionally, has its brighter sides. In this connection, I am pleased to express to you the very high and worthy patriotic sentiment, that has pervaded the prison body throughout the war period. The inmates to their fullest financial ability have responded to the calls for the various "war funds." If their proffered labor to help the cause could have been accepted, it would have been given without limitation. There was almost a universal desire expressed to join the colors. While all could not be accepted, the inmates' service flag shows 76 stars.

Women's Building.—The problem of properly housing women prisoners, if their retention here is an established policy of the State, is one that should receive legislative attention at the very earliest date possible. I attempted to show the importance of the removal of the women's cell building from the prison enclosure, where it now is, to a location outside the walls, in my report to you found on page 137 of the 7th Biennial Report for the year ending September 30, 1914, and again in my following report two years later, and now at this time would renew my recommendations made at those times with the further emphasis that no state with the advanced and progressive standing our state enjoys, can afford longer to house its women prisoners in the same enclosure and within 50 feet of the main cell wing wherein its male prisoners are confined, for obvious reasons to all.

Farm Operations.—I have to report that our farm and garden area has decreased, during the past biennial, rather than increased as I should have been pleased to report, by reason of the establishment of the State Game Farm here at the penitentiary. The game farm will require 40 acres,—this after further deduction for buildings and grounds, leaves us for tilling, about 100 acres. This is not nearly sufficient to produce our requirements of feed and garden products. For the past four years we have had 25 acres of potato land, adjacent to our grounds, leased, but surrendered it this year to the owner, who desired to use it, and now find ourselves in the anomalous position of having several hundred able bodied men, desirous of work, and yet having to buy our year's supply of potatoes. In my former reports I

have urgently recommended for economy's sake, if no other, the securing of more land for this institution. I know of no reason to change this recommendation but every reason pointing to the wisdom of such action. Every year we expend from our appropriations enough for subsistence products that we could grow, to buy a fair sized farm. We farm what land we have intensively and have received everything therefrom that was possible amounting to thousands of dollars, if we had purchased same.

Farm Buildings.—We have erected no new buildings during this biennial, except a creamery building, 46x58, at a cost of \$2,000.00, including butter and cheese equipment. We are now milking over 60 cows and making daily 40 pounds of cheese and about 30 pounds of butter, with surplus milk and by-products for our own use. This butter and cheese surplus you know is furnished to the several state institutions requiring such food products. The sale of our surplus provides us a credit with the other institutions of about \$500.00 or more per month at the present time, and shows a profitable balance sheet for the institution.

The value of maintaining our dairy herd we think is fairly indicated by the reduction of meat used in the institution, illustrated by a comparative statement as follows: (I took charge of the institution April 16th, 1918, and for comparison use the month of April, 1913) Prison population averaged 900, used 21,592 pounds of beef for that month, or 24 pounds per man, costing at 11½ cents per pound \$2.82 per capita per month. Contrasted for September, 1918, population 650, used 4785 pounds, or 7.36 pounds per man, costing 16 cents per pound or \$1.18 per capita for the month. The month of April, 1913, shows consumption of four-fifths of a pound of beef per man per day and month of September, 1918, shows ¼ pound daily per man. While the April, 1913, showing may have been a somewhat excessive ration, and the September, 1918, showing effected by war economies, yet the reduction is due largely to substituted dairy products which have no doubt been more nutritious and healthful as well as economical.

Hog Department.—On account of the high cost of feed, we have reduced our hog production to a point that only furnishes us our lard, necessary requisite in prison dietetics, and some pork to mix with beef hamburger, thus affording us better results at a minimum expenditure for meat products.

The State Game Farm.—When the State Fish and Game Commission Mr. L. H. Darwin, left upon our doorstep that infant of a State Game Farm this institution experienced its first touches of the esthetic, but its softening influence has cast pleasant shadows, and we thank him. Founded without some apprehension as to the feasibility of its location in connection with this institution, yet after three years, each one more successful results than the preceding year and further considering the possibilities of its accomplishment, when afforded the opportunity to do things, the wisdom of locating it as an adjunct of this institution appears to have been proved.

The game farm occupies the detached forty acres of land lying across the county road to the north of the penitentiary grounds, and if this proposition receives the legislative approval sought by the State Game Commission, it will require to develop their program, this entire acreage. How



ENTRANCE TO GROUNDS, STATE PENITENTIARY.



duties of a parole officer, and his effectiveness depends largely upon influence he is able to exert among those upon parole and his accomplishments are in proportion to the degree of confidence he commands from those to whom he is advising.

The report submitted by Mr. German makes an especially creditable showing for his administration of over 80 per cent of those paroled "doing good;" this is particularly true, inasmuch as the policy of the board during the past two years, has been to require all those men, as far as possible, to prove themselves upon parole before obtaining a release from the institution. Naturally if all go upon parole, the percentage of failure will be higher, than from a selected class, wherein the impossibilities are granted a final discharge direct from the institution.

War Work.—The official force of the penitentiary have subscribed something over \$12,500.00 to the several war funds. In addition such voluntary services as could be offered the local community work in this line have been freely extended. A splendid spirit of patriotism has been present at all times and an absence of any desire to shirk war duties. A number are awaiting their call to service and our service flag shows five stars, (one of which has become a golden one) as follows:

Lee C. Lewis, herdsman and dairyman.

Erik Elde, herdsman and dairyman.

E. P. Gregory, turnkey.

C. N. Yelle, guard.

S. H. Kemp, guard.

Mr. Lee C. Lewis, who received the first call from our official number was a graduate of Pullman State College, where he had received military training and was thus found early under the colors of his country. He was appointed and inducted into the service from here as second lieutenant, soon advanced to first lieutenant and further promoted as adjutant of the 1st Battalion, 47th Infantry, 4th Division (regular) A. E. F. Europe. As adjutant he was a staff officer and personal aide to the major of the Battalion. He was a young man, who possessed all the virtues to make a good citizen and a good soldier. He was killed in the battle of Chateau Thierry, France. I have no report covering the other enlisted men from here but know from their personnel that they are doing their full duty wherever or whenever it may be.

In Conclusion.—I desire to express my appreciation of the continued interest taken in the detail affairs of this institution by the Governor, Honorable Ernest Lister, and to the members of the Board of Control, who have extended to me the greatest courtesy and support. To the members of the official family for their most loyal support in the daily grind of our institutional affairs, my personal thanks.

Respectfully submitted,

HENRY DRUM,

Superintendent.

PAROLE OFFICER'S BIENNIAL REPORT COVERING PERIOD OCTOBER 1, 1916, TO SEPTEMBER 30, 1918.

Total number of paroles granted by prison board during this period...	329
Total number granted final releases by prison board.....	169
Total number of violations occurring among those paroled on or after October 1, 1916.....	65
Percentage of violations.....	19.75%
Percentage making good.....	80.25%
Average monthly earnings per man October, 1916.....	\$54.00
Average monthly earnings per man September, 1918.....	\$108.24
Total earnings for the period.....	\$213,104.21
Total number conditionally pardoned during the period.....	140
Number granted final release from conditional pardon.....	68
Number of violations during the period.....	10
Percentage of violations.....	7.15%
Percentage making good.....	92.85%
Total number from both departments entering active military service..	76

This report brings out an interesting fact in connection with the earning capacity of the men. Beginning in October, 1916, their average monthly earnings have increased one hundred per cent.

The Inmates' Relief Fund, organized in March, 1918, and operated under the supervision and direction of the parole officer, has proven a very successful venture. It not only has been of great benefit to the inmates who are without funds to rehabilitate themselves, but at the same time is operating at a small profit, thereby insuring its future. It fills one of the long felt needs of the department, and was put into operation without cost to the State.

Respectfully,

B. H. GERMAN,

Parole Officer.

WASHINGTON STATE PENITENTIARY,

Chaplain's Department.

Walla Walla, Wash., Sept. 30th, 1918.

State Board of Control, Olympia, Washington:

Gentlemen:—I have the honor of submitting herewith, my report for the year commencing October 1st, 1917, and ending September 30th, 1918.

During the aforesaid period, chapel service has been held in the auditorium every Sunday morning. I am pleased to state that the attention accorded me by the inmates during the religious exercises has always been of the very best. As man owes to God that which is highest and most beautiful, so I found that music may be employed on these occasions to the greatest, noblest and most effective advantage. I am duly grateful to be able to report the evident wholesome effects produced upon the inmates by musical selections rendered during these Sunday services by the W. S. P. band and orchestra.

It seems that appropriate music upon these occasions raises man above the commonplace, everyday thoughts into an ideal and joyous mood, makes him forget his trials and troubles, rivets mind and heart on the sacred words, and helps in leading him into the proper devotional atmosphere so essential to awaken in him only that which is noblest and best in human nature. Hence I respectfully ventured to suggest to the ones in charge

of this institution, at every opportunity, to enlarge and improve our band and orchestra to the end that whatever musical talent there may be found amongst the inmates may be afforded the fullest opportunity for self-expression and development of their respective talents.

Occasionally, whenever arrangements could be perfected, I secured the services of able speakers and eloquent preachers representing various denominations to address the inmates in the chapel.

I also found that aside from the purely entertaining and diverting standpoints, an occasional display of motion pictures to the inmates produced a most beneficial psychological effect upon them. Hence, whenever possible, at the close of the Sunday morning religious exercises, I endeavored to supply the inmates with a variety of moving picture shows, secured from local playhouses.

Christian Science services have been conducted in the auditorium every Sunday by members of that sect.

Of late Catholic services have been held regularly on the first Sunday of every month, for the benefit of inmates belonging to that faith, Rev. Fr. Buckley of Walla Walla officiating.

I am further pleased to state that during the past year our library by purchase and donation acquired possession of many new and splendid books. Some of these new books, from an educational standpoint, form, no doubt, the most valuable addition ever acquired by the prison library in the history of this institution.

The books have all been classified, numbered and arranged and await only the issuance of a supplement to our catalogue (issued April 24th, 1916) in order to make them properly known and accessible to our entire prison population.

I respectfully beg leave to recommend that the required paper and material be purchased as soon as possible so as to enable us to print a supplementary catalogue in time to have same available for inmates during the coming winter.

As previously stated in my report some of the many books of standard authors on fiction, constantly in demand, have been in circulation for many years and should be replaced by new ones.

During the last two years and for the first time in many years we were fortunate enough to secure the services of an experienced and competent inmate book binder, who, besides rendering the State valuable services in the overhauling and repairing of our library books, also taught one of the inmates the essential tricks of the book binder's trade, and thus enabled us to properly attend to our own book renovation and repairing. Of late, however, I regret to state, a most deplorable shortage of material prevented us from doing as much in that line as we would (or should) have done.

The print shop, as heretofore, continued to furnish forms and blanks for use in the different departments of the institution, thus contributing to the saving of what otherwise would have amounted to considerable expense.

The perusal and recording of the inmates' incoming and outgoing mail continues to consume the greater portion of my time. In order to facilitate the better supervision of this correspondence, as well as to enable me to more readily refer to and intelligently pass upon applications for special writing privileges, etc., or in the event of sickness, accident or death or the



NEW CREAMERY BUILDING, STATE PENITENTIARY.



escape of an inmate, enable the warden and his officers to promptly locate any such inmates' near relatives or friends, caused me, some time ago, to inaugurate a new card index system of inmates' correspondence supervision, in substance, as follows:

A separate card (11x10) for each inmate, with ruled off one inch margin at the top, reserved for the inmate's register number, his name, as well as the numbers of his cell, corridor and wing; right below the inmate's name and number, a section ($8\frac{1}{2} \times 7\frac{1}{2}$) of said card is set aside and divided into 24 spaces of equal size; each space appropriately headed at the top January, February, March, etc., i. e. one space devoted to every month for a period of two years; then each of these spaces is again divided by parallel lines into 3 separate columns; each of the 3 columns again being headed by a distinguishing capital letter, to-wit: "S" (for sent) "R" (for received), and "Sp" (for special letters).

Now whenever an inmate sends or receives a letter, the date is noted upon his card within the proper space devoted to that particular month, while the name of the sender or addressee, as the case may be, is recorded to the right of the correspondence card in a ruled off space ($8\frac{1}{2} \times 3$) under the caption "Addresses." A scheme of colored inks is employed to indicate the nature of correspondence as well as relationship of correspondent to inmate, as follows:

Black—Parents, brother, sister, wife, family.

Red—Friends.

Blue—Business.

Green—Acquaintances, miscellaneous.

If an inmate has more than one correspondent in any of the above mentioned colors, every additional correspondent of the same color is noted and distinguished upon the card by Roman numerals, in consecutive order, or by the number of dots appearing behind the date of reception or transmission of letter by my office.

We are thus enabled to tell almost instantly to whom, when or where an inmate has written at any given period of time.

All of the inmates' correspondence cards are arranged in alphabetical order and kept on file in my private office, under lock and key, in a cabinet made for that purpose.

I submit that this system of keeping track of the inmates' correspondence is vastly superior to the haphazard methods formerly in vogue in this institution.

Much of the work of real value that the chaplain must do comes from his personal contact with the men. For the past two years I have made it my business to personally interview all prisoners committed to this institution as soon as possible after their arrival, and thereafter endeavored to remain in close personal touch with them through frequent personal interviews. Individual difficulties of all kinds are thus brought to my attention, and I believe I can truthfully say that no man has come to me with his sorrows, his trials and troubles, with the affairs of his family or his own griefs that I have not done my best to give him personal attention and care.

I have frequently visited the hospital and administered to the needs of the sick confined therein to the very best of my ability.

About once each week I have also visited the inmates of the isolation ward, and those committed to solitary confinement for violation of prison rules. I have talked, counselled and advised with them and endeavored to make them see the error of their ways.

Accompanied by my wife and quite often with my wife and daughter, I have, at intervals, visited the women's department and found the inmates confined therein always ready to respond to spiritual advice and counsel.

Night school was held, at intervals, for a period of about six weeks during the months of October and November of the fiscal year, the attendance being about one hundred. Reading, writing and arithmetic were the principal subjects taught.

In closing, I wish to express to you and to all the officers connected with this institution, my sincere appreciation for your kind co-operation and the many courtesies extended to me in the discharge of my duties.

Respectfully submitted,

T. J. CANNON,
Chaplain W. S. P.

STATISTICS.

Number of inmates in prison September 30, 1918..... 609

Times imprisoned in Washington State

Penitentiary—	
First.....	483
Second.....	105
Third.....	20
Fourth.....	1
Total.....	609

Times imprisoned ex-convicts from other prisons—

First.....	83
Second.....	24
Third.....	2
Fourth.....	3
Fifth.....	3
Total.....	115

Admitted during the fiscal year..... 289

NATIVITY—

Born in the United States.....	217
Foreign born.....	72
Total.....	289

HABITS—

Intemperate.....	188
Temperate.....	100
Moderate.....	1
Total.....	289

PLEA—

GUILTY.....	189
Not guilty.....	100
Total.....	289

SOCIAL STATE—

Married.....	72
Single.....	168
Divorced.....	28
Widower.....	20
Widow.....	1
Total.....	289

RELIGIOUS BELIEF—

Protestant.....	201
Catholic.....	76
None.....	7
Greek.....	1
Jewish.....	1
Lutheran.....	2
Christian Science.....	1
Total.....	289

NATIONALITY—

White male.....	244
White female.....	12
Negro male.....	22
Negro female.....	2
Chinese male.....	3
Japanese male.....	1
Indian male.....	2
Indian female.....	1
Mexican male.....	2
Total.....	289

PARENTS—

Father dead.....	66
Mother dead.....	42
Both dead.....	90
Both living.....	76
Unknown.....	13
Total.....	289

EDUCATION—

Business college.....	1
Collegiate.....	6
Common school.....	207
High school.....	56
No education.....	16
Self-educated.....	1
University.....	2
Total.....	289

CONDITION OF HEALTH WHEN

RECEIVED—	
Good health.....	212
Fair health.....	29
Poor health.....	48
Total.....	289

COUNTIES WHERE CONVICTED—

Adams.....	0
Asotin.....	0
Benton.....	1
Chelan.....	3
Clallam.....	2
Clarke.....	9
Columbia.....	2
Cowlitz.....	3
Douglas.....	2
Ferry.....	0
Franklin.....	3
Garfield.....	1
Grant.....	2
Grays Harbor.....	10
Island.....	0
Jefferson.....	0
King.....	99
Kitsap.....	4
Kittitas.....	7
Klickitat.....	4

COUNTIES WHERE CONVICTED—

Lewis.....	13
Lincoln.....	4
Mason.....	0
Okanogan.....	9
Pacific.....	3
Pend Oreille.....	0
Pierce.....	81
San Juan.....	0
Skagit.....	5
Skamania.....	1
Snohomish.....	4
Spokane.....	32
Stevens.....	4
Thurston.....	4
Wahkiakum.....	0
Walla Walla.....	7
Whatecom.....	3
Whitman.....	1
Yakima.....	16
Total.....	289

STATISTICS—Continued.

OCCUPATION—

Accountant.....	1
Baker.....	3
Banker.....	4
Barber.....	1
Blacksmith.....	5
Bookkeeper.....	3
Bricklayer.....	1
Broker.....	1
Butcher.....	3
Cabinetmaker.....	1
Chauffeur.....	1
Carpenter.....	6
Cigarmaker.....	1
Clerk.....	7
Conductor.....	2
Cook.....	12
Domestic.....	2
Electrician.....	4
Engineer.....	6
Farmer.....	22
Fireman.....	6
Gardener.....	1
Glassblower.....	1
Horseman.....	1
Hairstresser.....	1
Housewife.....	4
Housekeeper.....	1
Janitor.....	2
Laborer.....	101
Laundryman.....	1
Logger.....	4

AGE AT TIME OF CONVICTION—

18 years.....	4
19 years.....	6
20 years.....	11
21 years.....	10
22 years.....	8
23 years.....	13
24 years.....	8
25 years.....	9
26 years.....	13
27 years.....	7
28 years.....	18
29 years.....	3
30 years.....	13
31 years.....	3
32 years.....	16
33 years.....	13
34 years.....	12
35 years.....	11
36 years.....	13
37 years.....	12
38 years.....	16
39 years.....	7
40 years.....	4
41 years.....	2

SENTENCES—

6 months to 1 year.....	2
6 months to 2 years.....	2
1 year to 2 years.....	3
6 months to 3 years.....	2
1 year to 3 years.....	4
6 months to 5 years.....	5
1 year to 5 years.....	7
18 months to 5 years.....	3
2 years to 5 years.....	5
3 years to 5 years.....	2
5 years to 6 years.....	2
3 years to 7 years.....	1
5 years to 7 years.....	5
6 months to 7½ years.....	1
2 years to 8 years.....	1
5 years to 8 years.....	1

OCCUPATION—

Longshoreman.....	2
Mariner.....	1
Machinist.....	10
Mechanic.....	4
Miner.....	4
Musician.....	1
Nurse (female).....	2
Nurse (male).....	3
Painter.....	3
Plumber.....	4
Porter.....	4
Printer.....	3
Railroad man.....	4
Sailor.....	4
Salesman.....	1
Shingleweaver.....	1
Shipbuilder.....	1
Steamfitter.....	1
Stenographer.....	1
Stockman.....	1
Stonecutter.....	1
Shoemaker.....	6
Tailor.....	2
Teacher.....	3
Teamster.....	4
Telegrapher.....	1
Typesetter.....	1
Waiter.....	7
Total.....	289

AGE AT TIME OF CONVICTION—

42 years.....	4
43 years.....	7
44 years.....	1
45 years.....	3
46 years.....	4
47 years.....	6
48 years.....	3
49 years.....	3
50 years.....	4
52 years.....	3
53 years.....	1
54 years.....	4
55 years.....	3
57 years.....	1
58 years.....	1
59 years.....	2
60 years.....	1
61 years.....	1
62 years.....	2
64 years.....	1
68 years.....	1
77 years.....	1
Total.....	289

SENTENCES—

6 months to 10 years.....	8
1 year to 10 years.....	12
2 years to 10 years.....	6
2½ years to 10 years.....	0
3 years to 10 years.....	2
5 years to 10 years.....	9
9 years to 10 years.....	1
10 years to 10 years.....	1
6 months to 15 years.....	24
1 year to 15 years.....	59
15 months to 15 years.....	2
18 months to 15 years.....	9
2 years to 15 years.....	14
2½ years to 15 years.....	3
3 years to 15 years.....	8
3½ years to 15 years.....	1

STATISTICS—Continued.

SENTENCES—

4 years to 15 years.....	4
5 years to 15 years.....	19
7 years to 15 years.....	1
6 months to 20 years.....	1
1 year to 20 years.....	12
1½ years to 20 years.....	1
2 years to 20 years.....	2
2½ years to 20 years.....	1
3 years to 20 years.....	1
5 years to 20 years.....	12
7 years to 20 years.....	2
10 years to 20 years.....	1
10 years to 25 years.....	2
10 years to 30 years.....	1
10 years to life.....	2

NATIVITY OF INMATES—

United States.....	217
Austria.....	5
Australia.....	1
Canada.....	13
China.....	1
England.....	5
France.....	2
Finland.....	2
Germany.....	13
Greece.....	2
Holland.....	1
Ireland.....	4
Italy.....	2

SENTENCES—

Straight sentences:	
Life.....	9
Criminal insane.....	1
Special sentences:	
Not less than 1 year.....	2
Not less than 2 years.....	1
Not less than 10 years.....	1
8 years to 15 years.....	1
5 years to 7½ years.....	1
18 months to 2 years.....	1
12 years to 15 years.....	1
1 year to 1½ years.....	1
4 years to 6 years.....	1
10 years to 11 years.....	1
Total.....	239

NATIVITY OF INMATES—

Japan.....	1
Korea.....	1
Mexico.....	4
Norway.....	3
Poland.....	1
Portugal.....	1
Russia.....	1
Scotland.....	2
Sweden.....	2
Switzerland.....	3
West Indies.....	1
Unknown.....	1
Total.....	239

REPORT OF PRISON PHYSICIAN.

Walla Walla, Wash., Sept. 30, 1918.

Hon. Henry Drum, Superintendent, State Penitentiary.

Sir:—I submit the attached medical report for the biennial period, October 1, 1916, to September 30, 1918, with the following recapitulations and recommendations.

Epidemics—During the month of October, 1917, we had 24 cases of paratyphoid fever.

Deaths—There have been 19 deaths due to the following causes: suicide 5, tuberculosis 4, typhoid fever 3, general peritonitis 1, chronic heart trouble 1, chronic cystitis 1, pneumonia 2, apoplexy 1, gunshot wound 1.

Typhoid—There have been 29 cases of typhoid fever.

Prophylaxis anti-typhoid bacterin—434 inmates have been immunized with anti-typhoid bacterin.

Syphilis—46 cases of syphilis were treated during this period, 21 cases were isolated until treatment became effective. September 30, 1918, there are only 4 syphilitic cases isolated. There are 8 inmates on treatment for syphilis.

Surgical Operations—33 major operations have been performed at the prison hospital during this period.

Malnutrition of Inmates—There were no marked malnutrition of inmates.

Psychological Study of Inmates—Binet-Simon tests of 233 inmates.

10 inmates were 15 years mental age.

112 inmates were 12 years mental age.

111 inmates were 7 years mental age. (moron)

Sanitation—The past two years, we have had a difficult problem combating the flies, on account improper method of handling the manure.

Water Supply—No contamination has been found in the water.

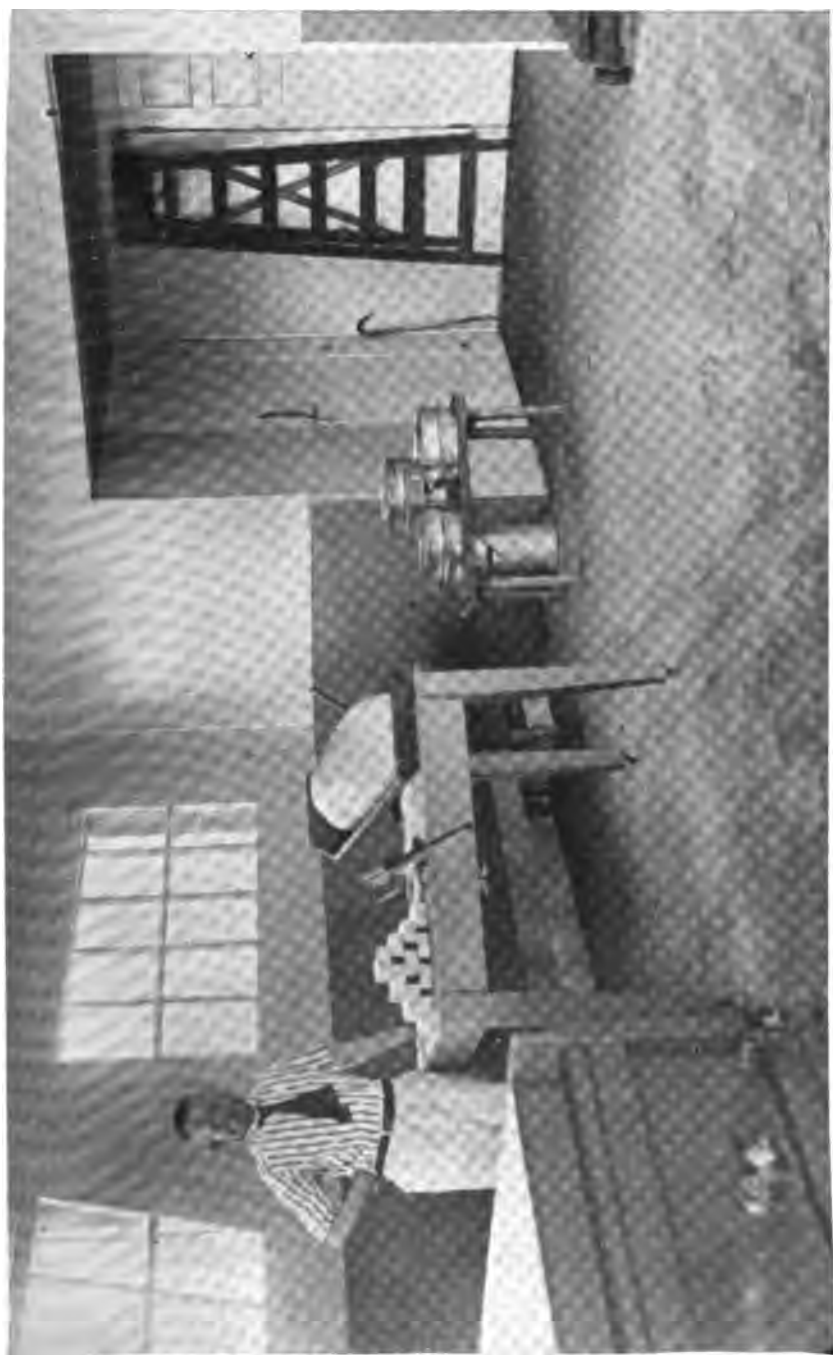
Food Supply—The milk supply was found contaminated with colon bacilli during the siege of typhoid, October, 1917.

Recommendation—I repeat my recommendation of 1916, that we need a separate building for the tubercular patients, as we have had in isolation an average of six cases per month of open tuberculosis in the past four years.

Respectfully,

BERT LOGAN JONES, M. D. C. M.

Prison Physician.



MAKING BUTTER AT THE STATE PENITENTIARY.





DEATHS.

Number	DIAGNOSIS	Date of Death	Admitted to Hospital	Received at Institution
7,909	Suicide by strangulation.....	1- 6-17	(In cell)	12- 1-15
8,013	Epilepsy and double lobar pneumonia.....	1-14-17	10-10-16	2- 8-16
7,449	Suicide by strangulation.....	5-16-17	(In cell)	11- 8-14
8,190	Chronic cystitis.....	5-27-17	1-13-17	12- 8-16
6,463	Pulmonary tuberculosis.....	6- 6-17	1-22-17	3-29-12
8,239	Acute pulmonary tuberculosis.....	6-26-17	6-19-17	1-27-17
8,177	General peritonitis following ruptured appendix.....	8-18-17	8-10-17	11-23-16
7,413	Pneumonia.....	9-24-17	9-16-17	10- 4-14
7,325	Suicide by strangulation.....	9-25-17	(In cell)	7- 7-14
7,540	Suicide by strangulation.....	9-30-17	(In cell)	12-29-14
8,159	Typhoid fever.....	10-24-17	10-14-17	11- 2-16
8,059	Typhoid fever.....	10-31-17	10- 8-17	4- 8-16
5,553	Apoplexy.....	11-25-17	(In cell)	10-20-09
7,867	Chronic myocarditis.....	4-14-18	11-13-17	10-13-15
7,666	Pulmonary tuberculosis.....	6- 9-18	11-21-17	4-10-15
8,105	Acute pulmonary tuberculosis.....	6-10-10	3-16-18	6-20-16
7,919	Hemorrhage from gunshot wound, severing carotid artery (left).....	8-20-18	.....	12- 1-15
8,313	Suicide by strangulation.....	8-31-18	(In cell)	6-12-17
7,862	Typhoid fever (immediate cause, hemorrhage).....	9- 2-18	8-17-18	10- 7-15

Nineteen deaths.

Total deaths biennial period 1918.....	19
Total deaths biennial period 1916.....	8
Total deaths biennial period 1914.....	10

INMATES TRANSFERRED TO MEDICAL LAKE.

Number	Date of Transfer	Received at Institution
7,743	1-27-17	6-16-15
8,154*	1-27-17	10-21-16
6,714	1-27-17	11-25-12
7,832	4- 9-17	9- 2-15
8,254	4- 9-17	2-26-17
8,259	4- 9-17	8- 3-17
7,126	9-28-17	1-19-14
8,342	9-28-17	7-27-17
7,138	9-28-17	1-19-12
8,306	9-28-17	5-17-17
8,436	5-13-18	12-16-17
8,440	5-13-18	1-20-18
8,142	5-13-18	9-20-16
8,379	5-13-18	10- 9-17
8,439	5-13-18	12-16-17

* Returned March 6, 1918, and transferred again July 9, 1918.

Total inmates transferred to Medical Lake biennial period 1918.....	15
Total inmates transferred to Medical Lake biennial period 1916.....	16
Total inmates transferred to Medical Lake biennial period 1914.....	32
Criminal insane received in institution during biennial period.....	3
Criminal insane discharged from institution during biennial period.....	3
Other insane in institution September 30, 1918.....	..
Epileptics in institution September 30, 1918.....	1
Total inmate population September 30, 1918.....	609
Total inmate population September 30, 1916.....	795
Total inmate population September 30, 1914.....	739

MEDICAL CASES TREATED IN HOSPITAL.

DIAGNOSIS	BIENNIAL PERIODS		
	1913	1916	1914
Adenitis.....		1	
Aortic regurgitation.....		1	
Aphasia.....		1	
Asthma.....	1	5	5
Arthritis.....		1	
Attacks of confusion.....	1	5	
Anuria.....		1	
Acute rheumatism.....	1	8	
Belpharitis.....		2	1
Bronchial pneumonia.....	1		
Bronchitis, chronic.....		2	6
Colic.....	8	1	
Collitis.....		1	
Convulsions.....		2	
Conjunctivitis.....	1	2	1
Constipation, chronic.....	2	23	
Cystitis.....	3	3	3
Dacrocystitis.....		2	
Dementia.....		7	2
Diabetes.....		4	1
Diabetes insipidus.....	1	1	
Diphtheria.....	1		
Eczema.....		2	
Epileptoid attack.....	8	1	1
Epistaxis.....		2	1
Erysipelas.....	1	1	2
Erythema.....	1	4	1
Epitheloma.....	1		
Floating kidney.....		1	
Furunculosis.....		2	
Gastric crisis.....		2	
General debility.....	10	9	17
Gonorrhea rheumatism.....	8	2	
Hemorrhage, urethral.....	1	1	
Hemorrhage, bowels.....	1	1	
Indigestion, acute.....		5	5
Influenza.....	27	7	7
Incipient tuberculosis.....	2	2	9
Iritis.....	1	1	
Jaundice.....		1	
Laryngitis, acute.....		1	1
Lymphangitis.....		1	
Lymphocytosis.....		1	
Melancholia.....		1	
Migraine.....		1	
Myocarditis, chronic.....	2	11	
Myositis.....	1		
Nephritis, acute.....	3	4	1
Neuralgia.....	1	1	4
Neuritis.....	1	2	2
Neurosis.....	3	4	
Otitis media.....	8	6	
Oedema, scrotum.....		1	
Orchitis.....		1	
Pleurisy, acute.....		2	4
Pleurisy, chronic.....	2	1	
Phimosis.....		1	
Pulmonary oedema, complicating pulmonary tuberculosis.....		1	
Pulmonary tuberculosis.....	15	18	8
Pneumonia.....	3		
Peptic ulcer.....	1	1	
Polyuria.....		1	
Pruritis.....		1	
Partial suffocation by gas.....		1	

MEDICAL CASES TREATED IN HOSPITAL—Continued.

DIAGNOSIS	BIENNIAL PERIODS		
	1913	1916	1914
Syphilis (total cases).....	46	65	2
Confined to syphilitic corridor.....	21		
Discharged from syphilitic corridor.....	17		
Remaining in syphilitic corridor September 30, 1918.....	4		
Tachycardia.....		1	
Taenia.....	4		
Toxema.....		1	
Typhoid fever.....	29		
Urethritis.....		1	
Total medical cases treated in hospital.....	190	252	84

SURGICAL CASES TREATED IN HOSPITAL.

DIAGNOSIS	BIENNIAL PERIODS		
	1913	1914	1914
Adhesions.....		1	
Abscess, chronic, back.....		1	
Abscess, perirectal.....	1	1	
Abscess, finger.....	1		
Abscess, tuberculosis.....		1	
Appendicitis.....	13	3	
Cholecystitis.....	1		
Corneal ulcer.....		1	
Contusions.....		10	
Cyst, testicle.....	1		
Ocellulitis, finger.....	8	3	1
Cellulitis, scrotum.....		1	
Cellulitis, submaxillary.....	1	1	
Cellulitis, left arm.....	1		
Cystic tumor.....	1		
Cataract.....	1	1	
Circumcision.....	3		
Defect in skull.....		1	
Double vasectomy.....	1		
Dislocation left hip, old.....		1	
Deviation nasal septum.....	3	1	
Enlarged thyroid.....	2	2	
Enlarged cervical nodes.....		1	
Enlarged axillary nodes.....	3		
Enlarged spleen.....		1	
Enlarged lymph nodes.....	2		
Fistula, rectal.....	1	2	
Fracture, radius.....		1	
Fracture, ribs.....		2	2
Fracture, clavicle.....		3	1
Fracture, fibula.....	1	1	2
Fracture, nose.....		1	2
Fracture, left patella.....		2	
Fracture, jaw.....	1		
Gangrene, traumatic.....		3	
Gonorrhea.....	5		
Glaucoma, left eye.....		1	
Gunshot wound.....	5	4	3
Hemorrhoids.....	4	14	2
Hernia, inguinal.....	18	22	4
Hernia, ventral.....	2	1	
Hip disease.....		1	
Hydrocele.....		3	4
Ingrowing toe nails.....	2		
Infected stump leg.....		1	1
Lacerations.....	16	5	16
Loss of power to close right eye.....	1		
Necrosis bone, finger.....	2	2	2
Neurosis.....		1	
Neuroorrhaphy popliteal nerve.....		1	
Osteitis right carpal and metacarpal bones.....		1	
Osteomyelitis.....		1	
Opening in soft palate.....		1	
Rectal papilloma.....		1	
Rodent ulcer.....	1		
Sinus, discharging.....	6	5	
Sprained ankle.....	4	1	1
Sprained knee.....	1	1	
Steel in eye.....	5	2	
Tenorrhaphy.....		1	
Traumatic partial amputation finger.....	4	1	
Tubercular nodes.....	11	4	
Traumatism of right eye, causing partial iridectomy and partial dislocation of iris.....	1		
Tumor of testicle.....	1		

SURGICAL CASES TREATED IN HOSPITAL—Continued.

DIAGNOSIS	BIENNIAL PERIODS		
	1918	1916	1914
Tumor of breast.....		1	
Undescending testicle.....	1	1	1
Ulcers.....	1	8	1
Urethral stricture.....		2	
Varicose veins.....	4	8	1
Varicocele.....		2	
Total surgical cases treated in hospital.....	141	183	44

MAJOR AND MINOR OPERATIONS.

Number	OPERATION FOR	Date of Operation	Received at Institution	Where Working
7,720	Inguinal hernia.....	12-7-16	5-29-15	Released
8,150	Loss of function middle finger left hand, due to rigidity, amputation at first phalange.....	1-10-17	6-13-16	Released
8,125	Loss of power to close right eye, due to injury when five years old, resulting in loss of function of the orbicularis muscle.....	1-10-17	7-8-16	Released
8,181	Inguinal hernia and rodent ulcer.....	1-17-17	11-20-16	Released
6,258	Ventral hernia.....	1-17-17	10-22-11	Released
7,832	Double inguinal hernia.....	1-17-17	9-21-15	W. S. P.
7,801	Appendicitis.....	2-15-17	6-22-15	Released
8,218	Inguinal hernia and undescending testicle removed.....	2-15-17	1-17-17	W. S. P.
7,902	Old scar on face removed.....	2-15-17	11-13-15	Released
7,592	Necrosis bone, finger.....	4-14-17	2-22-15	W. S. P.
8,010	Enlarged lymph nodes.....	4-14-17	1-31-16	W. S. P.
7,041	Chronic appendicitis.....	5-23-17	10-12-13	W. S. P.
6,700	Enlarged lymph nodes.....	5-23-17	11-15-12	Released
8,253	Inguinal hernia.....	5-23-17	2-27-17	Released
7,888	Tubercular lymph nodes, left cervical.....	6-1-17	11-13-15	W. S. P.
8,207	Hemorrhoids.....	6-16-17	12-13-16	Released
7,937	Hemorrhoids.....	6-21-17	12-10-17	Released
5,897	Varicose vein, right leg.....	6-21-17	11-10-10	W. S. P.
8,234	Fistula.....	8-16-17	4-19-17	Released
8,340	Hernia.....	8-16-17	7-27-17	Released
8,270	Hernia.....	8-16-17	3-27-17	W. S. P.
8,177	General peritonitis following a ruptured appendix.....	8-11-17	11-23-16	Died
8,253	Hernia.....	1-31-18	2-27-17	Released
8,340	Hernia.....	1-31-18	7-27-17	Released
8,451	Hernia.....	1-31-18	1-20-18	W. S. P.
7,938	Tubercular nodes.....	2-1-18	11-20-15	W. S. P.
8,422	Tubercular nodes.....	2-1-18	12-7-17	W. S. P.
8,474	Tubercular lymph nodes.....	3-2-18	2-25-18	W. S. P.
8,474	Tubercular lymph nodes.....	4-20-18	2-25-18	W. S. P.
8,488	Lacerating right arm and muscles of fascia, skin wound 4 x 8.....	4-23-18	2-28-13	W. S. P.
7,954	Appendicitis.....	5-1-18	12-17-15	W. S. P.
8,034	Axillary nodes.....	6-6-18	2-23-16	W. S. P.
8,400	Hernia.....	6-6-18	11-14-17	Released
8,387	Varicose veins.....	6-7-18	11-4-17	W. S. P.
7,888	Tubercular nodes.....	6-7-18	11-13-15	W. S. P.
7,288	Hemorrhoids.....	6-7-18	6-5-14	W. S. P.
8,467	Third and fourth fingers right hand amputated at second joint, extremity of fifth finger lacerated.....	6-11-18	2-10-18	W. S. P.
7,509	Removal submaxillary lymph nodes.....	7-30-18	12-11-14	Released
7,983	Tubercular nodes.....	7-30-18	11-20-15	W. S. P.
6,264	Double vasectomy.....	7-14-18	11-2-11	W. S. P.

Total major operations biennial period 1918.....33

Table No. 1.
RAW JUTE STATEMENT, OCTOBER 1, 1916, TO SEPTEMBER 30, 1918, SHOWING INVENTORIES, PURCHASES AND JUTE USED.

	BRAND										Total	Price	Items	Cost
	R. B. 3 in Heart Tri.	"M" Double Tri.	C. S. in Circle	Chun- der in Circle	BNP M Circle	R. B. 2 Red Green	R. B. 4 Black Green Tri.	R. B. 1 Black Green Tri.	R. B. 3 Double Green Tri.	R. B. 2 Green Tri.				
INVENTORY— October 1, 1916	1	730									1	\$17 25	\$17 25	
Totals.....	1	730									731	34 85½	25,449 69	\$25,466 95
PURCHASES— October 1, 1916, to Sep- tember 30, 1918	597	2,000	500								597	\$47 00	\$23,059 00	
			400								2,000	39 54½	59,065 00	
											500	50 00	25,000 00	
				398							400	52 80	25,774 00	
					600						398	51 40	20,457 20	
						5					600	45 00	27,360 00	
											5	48 66	233 25	
											5	48 00	240 00	
							5				5	49 20	246 00	
								5			5	52 20	261 00	
									5		5	53 60	268 00	
										5	5	56 80	284 00	
Purchased totals.....	597	2,000	900	398	600	5	5	5	5		4,615			187,267 45
Totals.....	598	2,730	900	398	600	5	5	5	5		5,346			\$212,734 40
JUTE USED— October 1, 1916, to Sep- tember 30, 1918	598	2,730	900								598		\$23,076 26	
											2,730		84,534 69	
											900		50,774 00	
				398							398		20,457 20	
					298						298		10,761 60	
Totals.....	598	2,730	900	398	298						4,952			194,603 75
INVENTORY— September 30, 1918					364	5					364	\$45 00	\$16,508 40	
											5	46 66	238 25	
											5	48 00	240 00	
											5	49 20	246 00	
							5				5	52 20	261 00	
									5		5	53 60	268 00	
										5	5	56 80	284 00	

Table No. 2.

STATEMENT OF JUTE FABRICS, OCTOBER 1, 1916, TO SEPTEMBER 30, 1918.

ARTICLE	On Hand October 1, 1916	Manufac- tured During Period	Totals	Sold and Delivered During Period	Used by State	Loss in Weight by Shrink- age	On Hand Sep- tember 30, 1918
Grain bags.....	144,270	2,323,164	2,467,434	2,066,290	.....	.....	369,144
Vegetable bags.....	.....	15,640	15,640	14,590	.....	.....	1,050
Hop cloth, yards.....	4,361 $\frac{1}{2}$	.....	4,361 $\frac{1}{2}$	4,090	2 $\frac{3}{4}$	.....	243
45-inch burlap, yards.....	53 $\frac{1}{2}$	3,769	3,822 $\frac{1}{2}$	1,082	153 $\frac{1}{2}$	.....	2,587
Burlap warp, yards.....	.....	675	675	675	.....	.....	.....
18-inch matting, yards.....	312 $\frac{1}{2}$	.....	312 $\frac{1}{2}$	72	20 $\frac{1}{2}$	.....	220
36-inch matting, yards.....	266	.....	266	73	102	.....	91
Jute waste No. 1, pounds.....	.....	86,398	86,398	32,664	34,718	2,602	16,324
Jute waste No. 2, pounds.....	.....	10,360	10,360	5,830	2,622	.....	1,908

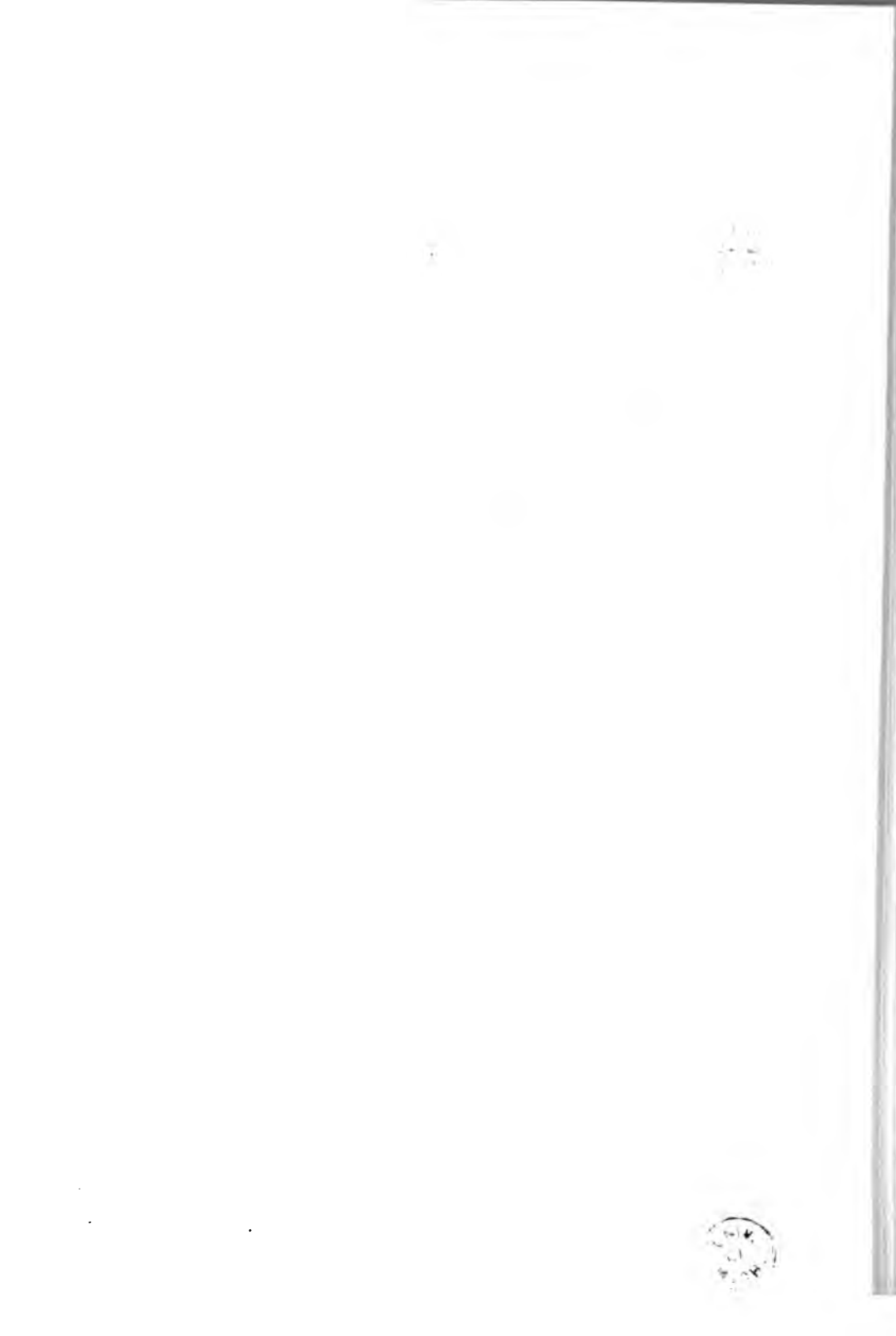
Table No. 3.

**STATEMENT OF JUTE FABRIC SALES, OCTOBER 1, 1916, TO
SEPTEMBER 30, 1918.**

Totals	Quantity	ARTICLE	Price	Amount
	1,110,000	Grain bags.....	\$0.105	\$116,619
	2,500	Grain bags.....	.110	275
	96,325	Grain bags.....	.125	12,040
	3,400	Grain bags.....	.135	458
	830,550	Grain bags.....	.190	157,804
	8,950	Grain bags.....	.230	2,058
2,008,290	45,905	Grain bags.....	.200	11,935
		Total.....		\$301,192
	14,340	Vegetable bags.....	\$0.105	\$1,505
14,500	250	Vegetable bags.....	.180	45
		Total.....		\$1,550
4,090	4,090	Hop cloth (yards).....	\$0.150	\$613
	582	45-inch burlap (yards).....	\$0.125	\$72
	400	45-inch burlap (yards).....	.135	54
1,082	100	45-inch burlap (yards).....	.250	25
		Total.....		\$151
	400	Burlap warp (pounds).....	\$0.125	\$50
675	275	Burlap warp (pounds).....	.200	55
		Total.....		\$105
72	72	18-inch matting (yards).....	\$0.300	\$21
73	73	36-inch matting (yards).....	\$0.450	\$32
	500	Jute waste No. 1 (pounds).....	\$0.020	\$10
32,664	32,164	Jute waste No. 1 (pounds).....	.025	804
		Total.....		\$814
	3,900	Jute waste No. 2 (pounds).....	\$0.005	\$19
5,830	1,840	Jute waste No. 2 (pounds).....	.005	9
		Total.....		\$29

SUMMARY.

Grain bags.....	\$301,192 19
Vegetable bags.....	1,550 70
Hop cloth.....	613 50
45-inch burlap.....	151 75
Burlap warp.....	105 00
18-inch matting.....	21 60
36-inch matting.....	32 85
Jute waste No. 1.....	814 10
Jute waste No. 2.....	29 15
Forfeitures.....	164 64
Total.....	\$304,675 48



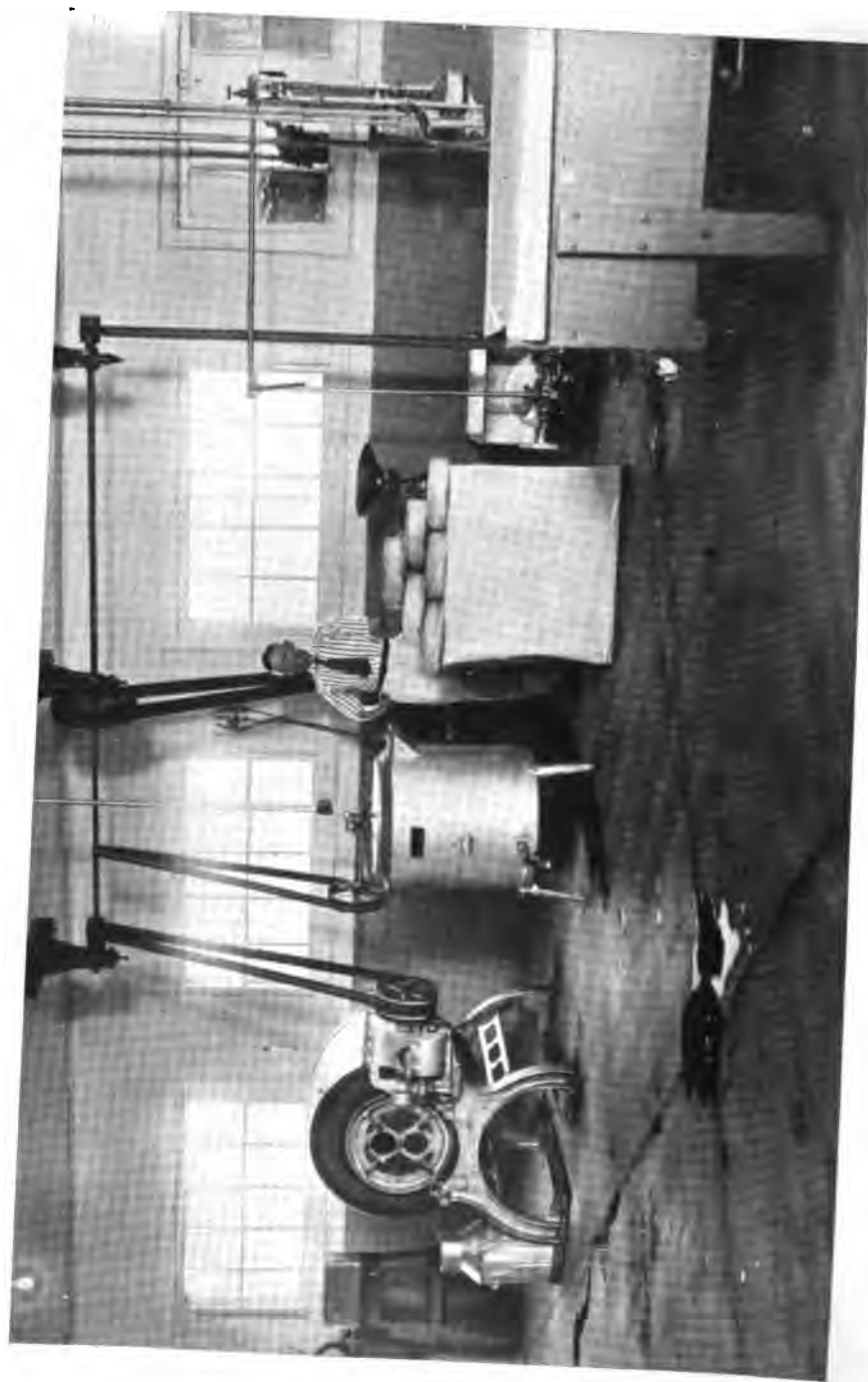


Table No. 4.

SHOWING FABRICS USED BY THE PENITENTIARY, OCTOBER 1, 1916, TO
SEPTEMBER 30, 1918.

Quantity	ARTICLE	Price	Amount
158 $\frac{1}{2}$ yds.	45-inch burlap.....	\$0.125	\$19 19
22 $\frac{1}{2}$ yds.	Hop cloth.....	.15	4 25
20 $\frac{1}{2}$ yds.	18-inch matting.....	.30	6 10
102 yds.	36-inch matting.....	.45	45 90
34,718 lbs.	Waste jute No. 1.....	.05	1,735 90
2,622 lbs.	Waste jute No. 2.....	.005	13 11
	Total.....		\$1,824 45

RECAPITULATION.

Remitted to State Treasurer, October 1, 1916, to September 30, 1918.....	\$304,675 48
Amount of fabrics used by the penitentiary.....	1,824 45
Total.....	\$306,499 93

Table No. 5.

STATEMENT SHOWING INVENTORIES AND VALUATIONS AT BEGINNING
AND END OF PERIOD.

	VALUE OF JUTE FABRICS ON HAND					
	September 30, 1916			September 30, 1918		
Grain bags.....	144,270	\$0.11	\$15,869 70	369,144	\$0.23	\$84,903 12
Vegetable bags.....				1,050	.18	189 00
Hop cloth, yards.....	4,361 $\frac{1}{2}$	.15	654 20	248	.30	72 90
45-inch burlap, yards.....	53 $\frac{1}{2}$	.125	6 68	2,587	.25	646 75
18-inch matting, yards.....	312 $\frac{1}{2}$	.30	93 70	220	.50	110 00
36-inch matting, yards.....	266	.45	119 70	91	.75	68 25
Jute waste No. 1, pounds.....				16,824	.05	816 20
Jute waste No. 2, pounds.....				1,908	.005	9 54
Totals.....			\$16,748 98			\$86,815 76

Value September 30, 1918.....\$86,815 76

Value September 30, 1916.....16,748 98

Increase during period.....\$70,071 78

Table No. 6.

**MISCELLANEOUS JUTE MILL SUPPLIES, OCTOBER 1, 1916, TO
SEPTEMBER 30, 1918.**

	Quantity	Price	Amount	Total
Batching oil.....	7,550 gals.	\$0.1625	\$1,226 67	
Spindle oil.....	2,908 gals.	.1750	508 90	
Flour.....	28,565 lbs.	4.80 bbl.	699 55	
Glue.....	2,696 lbs.	.2750	738 65	
Tallow.....	860 lbs.	.1500	129 00	
Parowax.....	277 lbs.	.0950	26 31	
Total.....				\$3,329
Miscellaneous supplies.....				11,11
Salaries.....			\$24,938 60	
Power.....			7,100 77	
Fuel.....			6,543 49	
Plant repairs.....			385 69	
General expense.....			939 85	
Total.....				\$39,90
Jute used (4,952 bales).....				194,60
Maintenance of officers (subsistence; fifteen employees at \$0.3687 per day for two years).....				4,03
Total.....				\$252,99

Table No. 7.

**SHOWING COST OF JUTE PRODUCTS MANUFACTURED, EXCLUSIVE OF P
CAPITA COST OF PRISONERS, OCTOBER 1, 1916, TO SEPTEMBER 30, 1918**

EXPENDITURES—			
Supplies.....		\$14,443 41	
Salaries.....		24,938 60	
Power.....		7,100 77	
Fuel.....		6,543 49	
Plant repairs.....		385 69	
General expense.....		939 85	
Total.....			\$54,3
Raw jute consumed (4,952 bales).....			194,60
Maintenance of officers (subsistence; fifteen employees at \$0.3687 per day for two years).....			4,03
Total.....			\$252,9
Less revenue derived from sale baled waste.....			84
Net total expenditures.....			\$252,14

Manufactured products.....1,806,455 pounds
Unit cost per pound.....\$0.1386

	Quantity	Weight	Unit Weight	Un Co
Grain bags.....	2,323,164	1,796,141	.7731	.10
Vegetable bags.....	15,640	7,046	.4505	.00
45-inch burlap, yards.....	3,769	2,593	.6879	.00
Burlap warp, pounds.....	675	675	1.0000	.13

Table No. 8.

SHOWING PER CAPITA COST OF INSTITUTION, WHEN OPERATION OF JUTE MILL IS INCLUDED, OCTOBER 1, 1916, TO SEPTEMBER 30, 1918.

Sale of jute fabrics.....(Table No. 3)	\$804,675 48
Increase in inventory.....(Table No. 5)	70,071 78
Total value of fabrics manufactured.....	\$874,747 26
Less manufacturing cost.....(Table No. 7)	252,149 57
Balance representing gross profits for above period.....	\$122,597 69
Expenditures for operation of prison.....	\$256,634 02
Deduct profits, as shown above.....	122,597 69
	\$134,036 33
Deduct miscellaneous cash sales.....	577 63
Net operating cost of institution to State.....	\$133,458 70
Average number of inmates during above period.....	645.28
Daily per capita cost, based on above table.....	\$0.2833

Table No. 9.

INMATES' FUND, OCTOBER 1, 1916, TO SEPTEMBER 30, 1918.

Balance October 1, 1916.....	\$3,467 37	
Received during period.....	29,194 36	
Disbursed during period.....		\$27,925 93
Balance on hand September 30, 1918.....		4,735 80
Totals.....	\$32,661 73	\$32,661 73

Table No. 1—POPULATION.
STATISTICS OF PRISON POPULATION FOR TWO YEARS ENDING SEPTEMBER 30, 1918.

MONTHS Commencing October 1, 1916, and ending September 30, 1918	Totals.....																		
	From Court, Male.....	From Court, Female.....	Escapes Captured and Returned.....	Returned from Conditional Pardon.....	Returned from Court.....	Returned from Insane Asylum.....	Received from Monroe....	Totals.....	Deported.....	Pardoned.....	Conditional Pardon.....	Transferred to Monroe....	Transferred to Insane Asylum.....	Escaped.....	Sentence Commuted, Final Release from Parole.....	Died.....	Order of Court.....	Expiration of Sentence....	Totals.....
October, 1916.....	14	1	4				4	23			6			4	16			1	21
November, 1916.....	24	1	1				2	26			11		1	2	10				32
December, 1916.....	20						2	23		1				16	8		1		33
January, 1917.....	26		5		1			35		1			3	8	23		4		43
February, 1917.....	18		1					20						5	1				6
March, 1917.....	24		1					25						4	2				7
April, 1917.....	21		2		3			27					3	5	1		2		10
May, 1917.....	16	1	3				2	20						5	32		2		72
June, 1917.....	9		4		1		2	17						7	1		2		13
July, 1917.....	14		4		1		9	23						4	23		1		38
August, 1917.....	7		6				2	15			18			4	1		1		47
September, 1917.....	20		3				9	23	1		2		6	4	2				35
October, 1917.....	10				2		2	15						2	18			1	15
November, 1917.....	24	2	1		3		2	29	4		14			6	15		3	1	49
December, 1917.....	15	1			4		18	39			12			4	24	1	6		47
January, 1918.....	16	2	1		3		2	27	1					7	8		1		42
February, 1918.....	14						9	25						5			1		26
March, 1918.....	26		2		1		1	31						2			1		36
April, 1918.....	16	3					1	20			3			3				1	23
May, 1918.....	15	2	4					21	1		13		5	3	23			2	45
June, 1918.....	20	1					9	32			1			5					40
July, 1918.....	17	1	1				8	27			1		1	3			1	2	32
August, 1918.....	5							5		1	46			3	27			1	82
September, 1918.....	12		3				3	18						2				1	4
	403	15	53	2	21	4	73	571	7	3	161		19	116	206	33	24	14	572

* Dropped from records.

Table No. 2.

SHOWING NUMBER OF CONVICTS IN PENITENTIARY FOR TEN YEARS
ENDING SEPTEMBER 30, 1918.

DATE	On Hand	Received	Released	Average Attendance	Per Cent. Increase	Per Cent. Decrease
September 30, 1909.....	1,121	423	318	924.55	.....	4.77
September 30, 1910.....	901	336	556	733.23	.....	20.69
September 30, 1911.....	815	415	501	600.76	.....	18.06
September 30, 1912.....	951	456	320	771.07	23.67	.....
September 30, 1913.....	840	376	436	833.08	8.04	.....
September 30, 1914.....	739	414	515	757.39	.....	9.097
September 30, 1915.....	883	489	345	864.45	14.15	.....
September 30, 1916.....	795	321	409	831.73	.....	3.786
September 30, 1917.....	784	232	238	787.12	.....	13.8
September 30, 1918.....	794	239	279	796.09	12.7	.....
Totals.....		3,801	4,022	7,899.37		

Average number of convicts for ten years, 789.93.

Table No. 3—COUNTY.

SHOWING NUMBER OF CONVICTS FROM DIFFERENT COUNTIES FOR TWO
YEARS ENDING SEPTEMBER 30, 1918.

COUNTIES	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Adams.....	14	3	2	15
Asotin.....	4	2	3	3
Benton.....	2	3	2	3
Chelan.....	11	9	12	8
Clallam.....	4	5	1	8
Clarke.....	17	12	10	19
Columbia.....	2	6	2	6
Cowlitz.....	5	6	4	7
Douglas.....	1	6	2	5
Ferry.....	3	1	2	2
Franklin.....	11	6	10	7
Gardfield.....		3		3
Grant.....	3	3	3	3
Grays Harbor.....	23	19	15	27
Island.....		1		1
Jefferson.....				
King.....	205	168	149	224
Kitsap.....	4	4	4	4
Kittitas.....	25	19	21	23
Klickitat.....	2	6	2	6
Lewis.....	23	27	19	31
Lincoln.....	9	5	10	4
Mason.....	2			2
Okanogan.....	8	14	6	16
Pacific.....	3	6	3	6
Pend Oreille.....	5	3	4	4
Pierce.....	82	59	68	73
San Juan.....				
Skagit.....	23	6	14	20
Skamania.....	4	1	1	4
Snohomish.....	53	15	31	37
Spokane.....	135	84	93	126
Stevens.....	9	5	7	7
Thurston.....	11	8	8	11
Wahkiakum.....				
Walla Walla.....	26	16	18	24
Whatecom.....	19	6	13	12
Whitman.....	24	9	21	12
Yakima.....	18	25	10	33
Totals.....	795	571	572	794

Table No. 4—CRIMES.
SHOWING CRIMES COMMITTED BY CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

CRIMES CONVICTED OF	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Abduction.....	3	2	3	2
Abortion.....				
Abuse of a female child.....	1			1
Accepting earnings of a prostitute.....	1		1	
Accessory to burglary, second degree.....		1		5
Adultery.....	2	5	2	2
Arson.....	3	1	2	5
Arson, second degree.....	4	4	6	2
Assault to commit murder.....	1		1	
Assault to commit rape.....				1
Assault to commit robbery.....	1			1
Assault to commit sodomy.....	1			17
Assault, first degree.....	18	11	12	28
Assault, second degree.....	25	28	25	
Assault, second degree, to commit sodomy.....	1	2	2	1
Assault and battery.....	1	1	2	
Assisting prisoner to escape.....	1			1
Attempt to commit burglary.....	5	2	3	4
Attempt to escape from prison.....		1		1
Attempt to commit carnal knowledge of female child.....		1		1
Attempt to commit forgery.....	1		1	1
Attempt to commit larceny.....		1		1
Attempt to commit murder.....	1			4
Attempt to commit rape.....	1	4	1	9
Attempt to commit robbery.....	11	4	6	
Attempt to commit sodomy.....		1	1	
Attempt to commit assault, second degree.....	2			2
Attempt to commit felony.....	2			2
Attempt to compel woman to marry.....		1		1
Attempted carnal knowledge of child.....	4		2	2
Attempt to utter no-fund check.....				
Bigamy.....	1	1	2	
Blackmail.....	1		1	
Bringing stolen property into state.....				
Burglary, first degree.....		3	3	160
Burglary, second degree.....	143	128	111	5
Carnal abuse of female child.....	4	3	2	18
Carnal knowledge of female child.....	19	12	13	1
Carnal knowledge of children.....	1	1	1	1
Carnal knowledge of horse.....	1			
Conniving at prostituting wife.....	2		2	1
Carnal knowledge of male person.....		1		1
Drawing no-fund check.....	1			2
Escaping from prison or jail.....	1	2	1	
Forgery.....		1	1	61
Forgery, first degree.....	72	53	64	11
Forgery, second degree.....	12	1	2	2
Gambling.....	1	1		166
Grand larceny.....	135	161	130	11
Habitual criminal.....	11	8	8	9
Incest.....	10	5	6	1
Insane criminal.....	1	2	2	3
Jail breaking.....	1	4	3	3
Larceny.....	2	1		1
Larceny from person.....	3	1	3	
Larceny by bailee.....	1		1	
Living off earnings of prostitute.....	2	2	3	
Making false statement of assets and liabilities of bank.....	3	3	4	2
Manslaughter.....	24	17	14	
Mayhem or maiming.....	1			
Misappropriation of public funds.....	1	1	2	
Murder, first degree.....	38	12	5	
Murder, second degree.....	53	6	17	
Obtaining goods under false pretenses.....	1			

Table No. 4—CRIMES—Continued.

SHOWING CRIMES COMMITTED BY CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

CRIMES CONVICTED OF	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Permitting wife to lead life of prostitution.....		1	1	
Perjury.....	3	3	5	1
Placing female in house of prostitution.....	4		3	1
Pimping.....		1		1
Rape.....	9	9	7	11
Receiving and selling stolen property.....	2			2
Robbery.....	118	36	65	89
Robbery from person.....	2			2
Seduction.....		1		1
Selling intoxicating liquor to Indians.....	3	1	2	2
Sodomy.....	15	13	15	13
Uttering forged instrument.....	3	1	3	1
Statutory rape.....		1		1
Being a common gambler.....		2		2
Harboring and concealing escaped prisoner.....		1		1
Kidnaping.....		1		1
Totals.....	795	571	572	794

Table No. 5—TERM OF SENTENCE.

SENTENCE	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Minimum Maximum				
Six months to six months one day.....	1	1	2	.....
Six months to one year.....	.....	3	1	2
Six months to eighteen months.....	1	.....	1	.....
Six months to two years.....	3	2	3	2
One year to two years.....	4	4	2	6
Two years to two years.....	1	1	1	1
Six months to three years.....	2	2	4	.....
One year to three years.....	6	7	6	7
Eighteen months to three years.....	1	.....	.....	1
Two years to three years.....	.....	2	.....	3
One year to four years.....	3	.....	3	.....
Two years to four years.....	2	2	1	3
Six months to five years.....	3	9	5	7
One year to five years.....	12	21	15	18
Eighteen months to five years.....	3	4	2	5
Two years to five years.....	9	11	6	14
Two and a half years to five years.....	5	.....	2	3
Three years to five years.....	9	2	5	6
Four years to five years.....	3	.....	2	1
Fifty-eight months to five years.....	1	.....	1	.....
Five years to five years.....	1	1	1	.....
Five years to five years one day.....	3	.....	3	.....
Five years to five years one month.....	2	1	.....	3
Five years to five years two months.....	1	.....	.....	1
Five years to five years three months.....	1	.....	1	.....
Five years to five years six months.....	4	.....	3	2
Two years to six years.....	1	.....	1	.....
Five years to six years.....	17	5	10	12
Three years to seven years.....	.....	2	.....	2
Five years to seven years.....	4	7	4	7
One year to seven years six months.....	3	.....	2	1
Six months to seven years six months.....	1	2	.....	3
Two years six months to seven years six months.....	1	.....	1	.....
Two years to eight years.....	.....	2	.....	2
Five years to eight years.....	6	1	3	4
Six years to eight years.....	1	.....	.....	1
Six months to ten years.....	9	13	11	11
One year to ten years.....	20	23	24	19
One and a half years to ten years.....	4	1	2	3
Two years to ten years.....	11	16	13	14
Two and a half years to ten years.....	3	3	2	4
Three years to ten years.....	10	6	4	12
Four years to ten years.....	1	.....	1	.....
Five years to ten years.....	65	19	37	47
Six years to ten years.....	2	1	1	2
Seven years to ten years.....	1	.....	.....	1
Seven and a half years to ten years.....	1	.....	.....	1
Nine years to ten years.....	2	1	2	.....
Ten years to ten years.....	.....	2	2	.....
Five years to twelve years.....	2	.....	2	.....
Seven years to twelve years.....	1	.....	1	.....
Ten years to twelve years.....	1	.....	.....	1
One year to fourteen years.....	1	1	.....	.....
One year six months to fourteen years.....	.....	.....	1	.....
Ten years to fourteen years.....	2	.....	2	37
Six months to fifteen years.....	23	50	36	1
Nine months to fifteen years.....	3	.....	2	.....
Ten months to fifteen years.....	1	.....	1	124
One year to fifteen years.....	111	118	100	2
Fifteen months to fifteen years.....	1	2	1	10
Eighteen months to fifteen years.....	6	12	3	34
Two years to fifteen years.....	24	24	14	15
Two years six months to fifteen years.....	12	9	6	27
Three years to fifteen years.....	26	11	16	.....
Three years six months to fifteen years.....	1	1	2	13
Four years to fifteen years.....	15	6	3	46
Five years to fifteen years.....	42	38	33	1
Five years six months to fifteen years.....	1	.....	.....	2
Seven years to fifteen years.....	2	1	1	1
Seven years six months to fifteen years.....	1	.....	.....	.....

Table No. 5—TERM OF SENTENCE—Continued.

SENTENCE	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Minimum Maximum				
Ten years to fifteen years.....	12	1	7	6
Ten years to seventeen years.....	1			1
Six months to twenty years.....	5	5	7	3
Nine months to twenty years.....	1			1
One year to twenty years.....	40	27	38	29
Eighteen months to twenty years.....	3	2	2	3
Two years to twenty years.....	13	4	7	10
Two years six months to twenty years.....	4	1	4	1
Three years to twenty years.....	7	5	5	7
Three years six months to twenty years.....	1	1	1	1
Four years to twenty years.....	2			2
Four years six months to twenty years.....	1			1
Five years to twenty years.....	41	19	20	40
Six years to twenty years.....		1	1	
Seven years to twenty years.....	3	2	1	4
Eight years to twenty years.....	1			1
Ten years to twenty years.....	19	3	5	17
Twelve years to twenty years.....	1	1	1	1
Fifteen years to twenty years.....	2			2
Five years to twenty-five years.....	6		3	3
Eight years to twenty-five years.....	1			1
Ten years to twenty-five years.....	10	2	3	9
Five years to thirty years.....	6		4	2
Ten years to thirty years.....	3	2	1	4
Fifteen years to thirty years.....	3			3
Ten years to thirty-five years.....	1			1
Ten years to forty years.....	3		1	2
Thirty-five years to forty-five years.....	1			1
Ten years to sixty-five years.....	1		1	
Ten years to ninety years.....	1			1
Ten years to ninety-nine years.....	1			1
Five years to life.....	1		1	
Ten years to life.....	3	3	1	5
Ten months to twenty years.....		1		1
Eight years to fifteen years.....		3		3
Fifteen months to two years.....		2	1	1
Fifteen months to five years.....		1		1
Three years to six years.....		3		3
Six years to twelve years.....		1		1
Five years to seven years six months.....		1		1
One year six months to two years.....		1		1
Twelve years to fifteen years.....		1	1	
One year to one year six months.....		1		1
Four years to six years.....		1		1
Ten years to eleven years.....		1		1
Not less than six months.....		1		1
Not less than one year.....		4	4	
Not less than two years.....	3	3	3	3
Not less than three years.....	1	1	2	
Not less than three years six months.....	1			1
Not more than fifteen years.....	1	1	1	1
Not more than twenty years.....	1			1
Not less than ten years.....		1		1
STRAIGHT SENTENCES				
Straight eighteen months.....	1		1	
Straight two and one-half years.....	1	1	2	
Straight five years.....	1	1	1	1
Straight ten years.....		1	1	
Straight fourteen years.....	1		1	
Straight twenty years.....	1			1
Straight thirty years.....	1		1	
Straight life.....	57	16	15	58
Death to life.....	6			6
Criminal insane.....	1	3	2	2
Indeterminate sentences brought forward.....	725	549	548	726
Totals.....	795	571	572	794

Table No. 7—NATIVITY.
SHOWING NATIVITY OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

NATIVITY	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Alabama.....	4	1	2	3
Alaska.....	1		1	
Arizona.....		1		1
Arkansas.....	1	7	3	5
California.....	27	29	15	41
Colorado.....	7	3	4	6
Connecticut.....	2	2	2	2
District of Columbia.....	2	2	2	2
Florida.....	2	1		3
Georgia.....	4	1	3	2
Illinois.....	38	29	24	43
Iowa.....	21	25	16	30
Idaho.....	4	4	3	5
Indiana.....	15	10	12	13
Kansas.....	18	19	18	19
Kentucky.....	21	12	14	19
Louisiana.....	5	4	3	6
Maryland.....	4	1	1	4
Maine.....	9	2	7	4
Massachusetts.....	17	11	13	15
Michigan.....	29	22	26	25
Minnesota.....	29	20	19	30
Missouri.....	38	21	24	35
Mississippi.....	7		2	5
Montana.....	8	9	5	7
Nebraska.....	11	8	5	14
New Jersey.....	3	2	2	3
New Mexico.....	1	2	1	2
New York.....	45	22	42	25
Nevada.....	3	1	3	1
North Carolina.....	3	1	2	2
North Dakota.....	1	2	1	1
Oklahoma.....	3	3	4	2
Ohio.....	31	17	20	28
Oregon.....	11	15	17	9
Pennsylvania.....	31	20	18	33
Rhode Island.....	4			4
South Dakota.....	1	5		6
Tennessee.....	14	6	8	12
Texas.....	12	11	9	14
Utah.....	2	2	1	3
Vermont.....	1			1
Virginia.....	9	4	5	8
Washington.....	50	46	39	57
West Virginia.....	3	5	3	5
Wisconsin.....	26	18	14	30
Wyoming.....	1	1	2	
Porto Rico.....	1		1	
Africa.....		1	1	
Austria.....	7	9	5	11
Australia.....	1	2	2	1
Bavaria.....	1			1
Bohemia.....	1			1
Canada.....	40	26	27	39
Chile.....	1			1
China.....	2	1	2	1
Denmark.....	5	3	3	5
England.....	23	10	23	10
France.....	2	2	2	2
Finland.....	6	4	4	6
Germany.....	20	28	16	32
Greece.....	7	3	4	6
Holland.....	1	2	1	2
India.....	2		1	1

Table No. 7—NATIVITY—Continued.
SHOWING NATIVITY OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

NATIVITY	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Ireland.....	12	6	9	9
Italy.....	26	7	11	22
Jamaica.....	2	1	1	2
Japan.....	8	2	5	5
Korea.....	1	1		2
Mexico.....	2	10	5	7
Montenegro.....	3		2	1
New Brunswick.....	1			1
Norway.....	10	8	10	8
Philippine Islands.....	2			2
Poland.....	5	1	3	3
Portugal.....		1		1
Russia.....	7	3	4	6
Scotland.....	6	2	4	4
Servia.....	1		1	
Spain.....	1	1	2	
South America.....	2			2
Sweden.....	6	3	5	4
Switzerland.....	1	4	1	4
Syria.....	1			1
Turkey.....	5	2	2	5
Totals.....	795	571	572	794

Table No. 8—OCCUPATION.

SHOWING OCCUPATION OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

OCCUPATION	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Accountant.....	5	2	4	3
Actor.....	1	1	1	1
Architect.....	1	1	1	1
Attorney-lawyer.....	3	1	1	2
Agent.....	1	1	2	1
Baker.....	4	7	2	9
Banker.....	3	7	7	3
Barber.....	16	8	14	10
Bartender.....	3	2	2	1
Blacksmith.....	15	6	8	13
Boiler-maker.....	2	1	1	2
Bookbinder.....	1	1	1	1
Bookkeeper.....	13	9	14	8
Bricklayer.....	1	1	1	1
Broker.....	1	1	1	1
Butcher.....	5	4	5	4
Cabinetmaker.....	3	1	1	3
Chauffeur.....	1	1	1	1
Chicken man.....	1	1	1	1
Carpenter.....	18	8	10	16
Cement finisher.....	1	1	1	1
Cigarmaker.....	1	1	1	2
Clerk.....	5	15	10	10
Contractor.....	1	3	1	3
Cook.....	52	26	38	40
Cotton weaver.....	1	1	1	1
Cowboy.....	1	1	1	1
Crackerman.....	1	1	1	1
Dairyman.....	2	1	2	1
Demonstrator.....	1	1	1	1
Domestic.....	1	2	1	1
Dry cleaner.....	1	1	1	1
Dressmaker.....	1	1	1	1
Detective.....	1	1	1	1
Electrician.....	8	5	5	8
Engineer.....	22	7	11	18
Engineer, civil.....	1	1	1	1
Engineer, gas.....	1	1	1	1
Engraver.....	1	1	1	1
Farmer.....	65	48	45	68
Fireman.....	13	11	11	13
Fisherman.....	1	1	1	1
Florist.....	1	1	1	1
Gardener.....	1	1	1	1
Glassblower.....	1	1	1	1
Hatter.....	1	1	1	1
Horseman.....	4	1	2	3
Hairdresser.....	1	1	1	1
Hotel keeper.....	5	3	3	2
Housewife.....	6	5	4	7
Housekeeper.....	4	3	4	3
Ironworker.....	1	1	1	1
Jeweler.....	3	1	1	2
Janitor.....	2	2	1	3
Journalist.....	3	1	1	2
Laborer.....	237	222	184	275
Landgrader.....	1	1	1	1
Laundryman.....	4	1	1	1
Liveryman.....	1	1	1	1
Locksmith.....	2	1	1	1
Logger.....	9	4	5	8
Longshoreman.....	1	2	1	2
Mariner.....	1	1	1	1
Machinist.....	19	14	13	20

Table No. 8—OCCUPATION—Continued.
SHOWING OCCUPATION OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

OCCUPATION	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Marble engraver.....	1			1
Mattress maker.....	1		1	
Mat maker.....	1		1	
Merchant.....	2			2
Millman.....	3		2	1
Millwright.....	1		1	
Miner.....	29	9	16	22
Moulder.....	2			2
Musician.....	3	4		7
Nurse (female).....	1	2		3
Nurse (male).....	4	4	4	4
No occupation.....	1			1
Painter.....	10	9	7	12
Photographer.....	2		1	1
Physician.....		1		1
Plasterer.....	1		1	
Peddler.....		1		1
Plumber.....	2	5	2	5
Porter.....	5	4	1	3
Presser.....		1	1	
Printer.....	3	8	3	3
Poultryman.....	1			1
Rancher.....	6		3	3
Railroad man.....	7	8	3	12
Sailor.....	10	7	5	12
Salesman.....	9	5	6	8
Singer.....	1		1	
Shingleweaver.....	6	2	3	5
Steamfitter.....	4	2	4	2
Stenographer.....	1	1		2
Stoker.....	1	1	1	1
Shipbuilder.....		1		1
Section hand.....	1			1
Stockman.....	1	1		2
Stonecutter.....	1	1	1	1
Shoemaker.....	11	6	6	11
Surveyor.....	1		1	
Student.....	3			3
Tailor.....	15	7	16	6
Teacher.....	3	3	2	4
Teamster.....	22	15	23	14
Telegrapher.....	2	1	3	
Telephone operator.....	1		1	
Track foreman.....	1		1	
Twine maker.....	1		1	
Typesetter.....		1		1
Upholsterer.....	1			1
Waiter (waitress).....	27	15	15	27
Woodchopper.....	1		1	
Watchmaker.....	3			3
Mechanic.....		5	1	4
Totals.....	796	571	572	794

Table No. 2—AGE.

SHOWING AGE OF CONVICTED MEN WHEN CONVICTED DURING TWO YEARS
ENDING SEPTEMBER 30, 1918.

AGE	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
16 years.....	1			1
17 years.....	2		1	1
18 years.....	5	7	6	6
19 years.....	12	13	6	19
20 years.....	20	19	14	25
21 years.....	14	18	14	18
22 years.....	45	28	34	39
23 years.....	23	22	23	22
24 years.....	28	23	23	28
25 years.....	27	15	11	31
26 years.....	30	23	23	30
27 years.....	33	18	26	25
28 years.....	38	28	22	44
29 years.....	23	14	17	20
30 years.....	27	25	32	20
31 years.....	16	9	10	15
32 years.....	26	28	24	30
33 years.....	23	23	16	30
34 years.....	25	21	18	28
35 years.....	36	23	33	26
36 years.....	27	16	17	26
37 years.....	31	24	13	42
38 years.....	15	25	19	21
39 years.....	18	18	19	17
40 years.....	23	12	21	14
41 years.....	13	4	5	12
42 years.....	16	9	8	17
43 years.....	19	12	9	22
44 years.....	11	5	7	9
45 years.....	13	5	8	10
46 years.....	17	8	8	17
47 years.....	12	9	10	11
48 years.....	13	6	7	12
49 years.....	10	7	7	10
50 years.....	12	4	7	9
51 years.....	8	4	6	6
52 years.....	11	6	7	10
53 years.....	6	1	4	3
54 years.....	7	4	4	7
55 years.....	5	5	5	5
56 years.....	5	1	4	2
57 years.....	4	2	1	5
58 years.....	3	5	3	6
59 years.....	5	3	2	6
60 years.....	5	5	2	8
61 years.....	3	2	2	3
62 years.....	2	3	2	3
63 years.....	8	4	7	5
64 years.....	2	1	1	2
65 years.....	2			2
66 years.....	4		3	1
67 years.....	3			3
68 years.....	3	1		4
69 years.....	1	1	1	1
70 years.....	1			1
71 years.....	1	1		2
73 years.....	1		1	
74 years.....		1		1
75 years.....	1		1	
77 years.....		1		1
78 years.....				
Totals.....	795	571	572	794

Table No. 10—SEX AND COLOR.

SHOWING SEX AND COLOR OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

SEX AND COLOR	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
White male.....	712	504	522	694
White female.....	8	14	10	12
Negro male.....	49	37	24	62
Negro female.....	5	2	3	4
Indian male.....	8	5	3	10
Indian female.....		2		2
Chinese male.....	2	3	2	3
Japanese male.....	9	2	5	6
Kanaka male.....	1		1	
Hindu male.....				
Mexican male.....	1	2	2	1
Totals.....	795	571	572	794

Table No. 11—EDUCATION.

SHOWING EDUCATION OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

EDUCATION	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Academic.....	7			7
Business college.....	2	4		6
Collegiate.....	8	10	12	6
Common school.....	592	389	428	553
Grammar school.....	3			3
High school.....	60	139	89	110
No education.....	48	22	38	44
Not English.....	2	2		4
Private.....	24			24
Private and public.....	16		8	8
Self-educated.....	7	3	2	8
Read only.....	7			7
Read and write.....	11			11
University.....	8	2	7	3
Totals.....	795	571	572	794

Table 12—HABITS.
SHOWING HABITS OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

HABITS	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Intemperate.....	507	871	393	482
Moderate.....	64	88	24	78
Temperate.....	224	162	152	234
Totals.....	795	571	572	794

Table No. 13—PLEAS.
SHOWING PLEAS OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

PLEAS	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Gilty.....	455	394	365	474
Not guilty.....	340	187	207	320
Totals.....	795	571	572	794

Table No. 14—CIVIL CONDITION.
SHOWING CIVIL CONDITION OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

CIVIL CONDITION	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Married.....	220	150	170	200
Single.....	479	340	337	482
Divorced.....	47	47	30	55
Widower.....	47	33	25	55
Widow.....	2	1	1	2
Totals.....	795	571	572	794

Table No. 15—RELATIONS.

SHOWING DOMESTIC RELATIONS OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

DOMESTIC RELATIONS	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Father dead.....	179	118	114	183
Mother dead.....	97	83	63	117
Both dead.....	271	194	215	250
Both living.....	203	157	160	200
Unknown.....	45	19	20	44
Totals.....	795	571	572	794

Table No. 16—FORMER IMPRISONMENT.

SHOWING FORMER IMPRISONMENT IN WASHINGTON STATE PENITENTIARY
FOR TWO YEARS ENDING SEPTEMBER 30, 1918.

W. S. P.	First Term	Second Term	Third Term	Fourth Term	Totals
On hand October 1, 1916.....	669	105	20	1	795
Received during two years.....	708	86	14	2	810
Discharged during two years.....	692	53	7	3	755
On hand September 30, 1918.....	668	105	20	1	794

Table No. 17—OTHER IMPRISONMENT.

SHOWING EX-CONVICTS FROM OTHER PRISONS FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

OTHER PRISONS	First Term	Second Term	Third Term	Fourth Term	Fifth Term	Totals
On hand October 1, 1916.....	84	24	2	3	3	116
Received during two years.....	91	17	3	1	.....	112
Discharged during two years.....	108	26	5	6	.....	145
On hand September 30, 1918.....	83	24	2	3	3	115

Table No. 18—RELIGION.

SHOWING RELIGIOUS BELIEF OF CONVICTS FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

RELIGION	On Hand October 1, 1916	Received During Two Years	Dis- charged During Two Years	On Hand Sep- tember 30, 1918
Atheist.....	10	1	1	10
Catholic.....	234	150	155	229
Christian Scientist.....		1		1
Greek.....	2	1		3
Jewish.....	8	3	6	5
Lutheran.....	1	3		4
Mohammedan.....		1		1
No religion.....	38	13	19	30
Protestant.....	504	398	391	511
Totals.....	795	571	572	794

Table No. 19—PARDONS AND RELEASES.

SHOWING NUMBER OF PARDONS AND RELEASES FROM OCTOBER 1, 1895, TO
SEPTEMBER 30, 1918.

YEAR ENDING	Average Attend- ance	Pardons Granted	Per Cent. of Pardons to Popu- lation	Total Releases All Sources	Per Cent. of Pardons to Total Releases
September 30, 1895.....	440.2	16	.03	159	.10
September 30, 1896.....	414.8	20	.04	157	.12
September 30, 1897.....	402.2	22	.05	167	.13
September 30, 1898.....	354.6	20	.06	210	.09
September 30, 1899.....	317.1	9	.03	153	.06
September 30, 1900.....	365.6	7	.02	138	.05
September 30, 1901.....	462.8	8	.019	185	.044
September 30, 1902.....	508.2	6	.01	204	.03
September 30, 1903.....	620.09	12	.011	273	.04
September 30, 1904.....	671.66	10	.015	288	.0348
September 30, 1905.....	738.3	21	.028	300	.07
September 30, 1906.....	824.6	5	.006	313	.016
September 30, 1907.....	882.8	6	.0067	312	.019
September 30, 1908.....	970.8	8	.00824	366	.0218
September 30, 1909.....	924.55	27	.0292	318	.0649
September 30, 1910.....	733.23	14	.01909	556	.02518
September 30, 1911.....	600.76	21	.03495	501	.0419
September 30, 1912.....	771.07	41	.05317	320	.1261
September 30, 1913.....	833.8	27	.03241	496	.05555
September 30, 1914.....	757.29	30	.03961	515	.0682
September 30, 1915.....	864.45	6	.0069	345	.01738
September 30, 1916.....	831.73	4	.0043	409	.00977
September 30, 1917.....	787.12	7	.006893	293	.024
September 30, 1918.....	786.09	9	.011449	279	.032





COMPANIES A, B, C AT MORNING EXERCISE, STATE TRAINING SCHOOL.

STATE TRAINING SCHOOL.

State Board of Control, Olympia, Wash.

Gentlemen: I have the honor to submit herewith the report of the State Training School for the biennial period October 1st, 1916, to September 30th, 1918. Aside from the purely statistical data this report covers only the last seven months of the biennium for the reason that it is very difficult for one coming in toward the end of a period to discuss intelligently the work that has gone before.

After making a careful survey of the school and its needs it seemed that one of the most necessary things was to establish some definite method by which boys were to be dealt with in regard to their progress, or lack of progress, in the school and to improve the discipline and morale of the institution. With this in view we proceeded to establish two things that we felt would produce the desired results, a merit system and military training.

THE MERIT SYSTEM.

Although the boys who come to the Training School are boys with whom the parents, the schools and the juvenile officers have failed they are not unlike average boys or average men in their mental processes. They are harder, much harder, to handle. They do present unusual problems individually and collectively but, fundamentally, they are just boys. No progress can be made with them mentally, morally or physically unless there is incentive. Good work must be rewarded, poor work condemned. Justice must be the basis of all dealings with boys.

It was therefore evident that the first thing that must be done was to establish some system whereby every boy got exactly what was coming to him and whereby every effort was to be rewarded. After careful consideration a merit system was adopted with one hundred merits per month as a basis. The boy who breaks no rules, who is reasonably industrious and shows that he means to do what is right receives this number of merits. The boy who tries hard, does his work well and zealously, who guards the reputation of his company and his school, who assists in preserving property and order, who lives up to the trust that is placed in him or who is an officer in the military organization may receive from 5 to 50 extra merits per month. The boy who has three months without a demerit receives a bonus of 100 points, a second three months means a bonus of 150 and a third three months 200. It is evident, therefore, that the exceptional boy can earn his right to parole in a little less than a year and we regard this as the shortest possible time that any boy who needs to come to the school should be dismissed; 1,500 merits are necessary before a boy can be paroled and the average boy who tries can earn his way out in from 12 to 15 months.

This system meets all of the requirements, it furnishes incentive for good behavior, interest and industry. It is just because no exceptions are made. All reports for delinquency or for reward are turned in by the officers to the company officer who merits or demerits as the case may be. Every boy is heard in his own defense and all merits or demerits are reviewed by the superintendent so that a balance may be kept between the

officer who is inclined to be too lenient and the officer who is inclined to be too harsh. The boy who runs away and thus breaks his trust forfeits all that he has earned and must begin over when he is returned.

A further advantage of the merit system is that it necessitates the keeping of accurate records and enables the officers of the school to tell at a glance just what a boy has been doing every week he has been in the school. It naturally requires closer supervision on the part of the officers and that in itself is no small gain, for we believe that prevention is worth many times its weight in cure and close supervision means the prevention of carelessness and resultant slovenly habits.

MILITARY TRAINING.

Nine-tenths of the boys who come to the training school do not know the meaning of the word "discipline," have little or no respect for authority and have acquired careless, if not bad, habits. It is also true that eight out of every ten boys who come to the school are addicted to the use of cigarettes and other forms of tobacco which naturally lessens their physical strength. Most of them, too, have never had systematic physical training. Very few of them have ever been trained to mental or physical alertness. In short, they form a mob mentally, physically and industrially, unless the above mentioned deficiencies are corrected by some method of training that reaches mind, body and hand.

On April first competent instructors were secured and a thorough course in military training begun. Immediately on rising in the morning every boy in the school is marched to the parade ground between the dormitories and given 15 minutes of setting up exercises and for 45 minutes every afternoon regular drill is given. Two years ago it would not have been possible to tell one who had not observed the progress of the boys how much had been accomplished in a month but practically every one now has seen what it has done for the young men of every community who have had similar training in our military camps. Shoulders straightened, eyes brightened, feet lifted instead of shuffled. "Yes sir" replaced "yep" and "yeah." A command was meant to be obeyed instantly instead of next minute or next hour or not at all. Faces were washed, shoes tied, clothes kept in order. And along with it all came self respect and better health and respect for authority.

We doubt very much if any boy in the school can be found who dislikes the military work; we avoided that shoal by making it recreation instead of drudgery, by causing the companies to vie with one another for perfection, by a careful promotion of those who showed individual excellence. Then, too, other rewards were given. Regulation army uniforms were bought for every boy so that pride could have a chance to manifest itself and the officers in charge could point out effectively what such a uniform should carry underneath it and it was not difficult to teach what honor and good citizenship meant.

On August 8th, four months after work was begun, Governor Lister, Adjutant General Moss and Major Campbell reviewed the boys in competitive drill in the streets of Chehalis. On September 18th, a picked company drilled two days before the immense crowds at the State Fair at Yakima. On October 2nd another company drilled at the Western Washington Fair

at Puyallup, and on Patriotic Day in Centralia all three companies drilled in competition with the National Guard and more than held their own. Does anyone think that the boys were not proud of themselves and that these things did not mean increased effort on their part?

With the merit system and military drill in full swing disciplinary troubles became merely incidental and not the nightmare of every officer. Time can be given to other things and it is not necessary to fight all the time to maintain order. Of course, problems in discipline will always be present and other methods have to be used. Sometimes a reprimand is all that is necessary, or increased work or deprivation of privileges. Occasionally it is necessary to spank a boy but that is the exception and not the rule. When this is necessary it is done humanely and by one of the two men in the school who are furthest removed from the individual offense so that whipping in anger or in spite is avoided.

I cannot pass over a discussion of discipline and military drill without expressing the hope that the day is not far distant when our public schools will make military drill a part of their curriculums for its physical and disciplinary value. I know from years of experience as director of athletics in high schools that too much time and money is spent on the physically strong and far too little on the physically weak. There is nothing in this hope that need terrify the most ardent pacifist or violent anti-militarist. Anyone who has had the opportunity of seeing what an hour a day for six months of such training has done for the boys at the Training School, physically, mentally and morally, will say, "God speed the day."

EDUCATIONAL.

We are falling down and have been for some time in the educational side of our work. We must rectify this error as fast as possible, adopt modern educational methods and produce results. To merely detain young boys for a year or two and then return them to their own or some other community is a waste of time, money and effort. I do not mean to convey the idea that the school is not or has not been useful in an educational way but I do mean that we are doing much less than we should. The fault lies largely with the public which does not understand the purposes of the school and which through its ignorance compels the state to hire men and women that are not fitted for the work. Naturally most of our boys are backward in their literary, moral and industrial education. We should have the very best instructors that money can obtain. To ask men and women who have prepared themselves for such work to work for from \$50 to \$75 per month is unfair. It means from 10 to 14 hours of the hardest kind of work seven days a week and 52 weeks a year. It takes brains, patience, understanding, sympathy and self-sacrifice to succeed. Every employee about the institution should be worthy of emulation in every way. Men or women who can barely read or write, who cannot speak good English, who cannot inspire and lead are so much dead timber. We do not want the failures from other walks of life and that is about all \$50 or \$60 will buy. Of course there are always a few who will stay no matter how small the salary because they are wrapped up in the work but these men and women should not be penalized for their sacrifice.

Practically all of our boys are backward in part or all educational lines. To bring these boys up to standard our school room work should cover the entire year instead of nine months. The sub-normal boys should be segregated and put in the hands of a teacher trained in that kind of work. We have some 30 boys that are past the eighth grade; we can offer them nothing in class room work. Obviously, this is wrong; we ought to add now another teacher and some advanced work. It is not fair to the boy or to the community to stop his education at this critical point.

Our vocational work is in a similar condition. We ought to be prepared to give instruction in engineering—gas engine, auto repair, lathe work, electricity, repair of farm machinery, etc.—the branches that are the most practical today and that are coming rapidly to the front. We ought by all means to put our farm work on a broader basis. It is not enough to plant seed and hoe the crops and harvest them. There ought to be scientific instruction in soils, drainage, irrigation, rotation of crops, fertilizers, dairying, gardening, stock raising, poultry husbandry, construction of simple farm buildings and machinery. These two lines ought to be made the major work and the other activities in industrial lines incidental. To do this will mean the expenditure of sufficient money to procure competent instructors and a small outlay for additional equipment and building. Much of the equipment that we already have is suitable for this advanced work, and the expense of making a start would not be large.

THE FARM.

The Training School farm of 235 acres is practically all river bottom. Until this summer there was but 160 acres of tillable land, 53 acres was in stumps and about 25 in buildings, grounds, etc. This ground is rated as very fertile and when one looks at the returns for the last few years and discovers that the gross returns were about \$40 per acre he begins to look for the reason. That the drainage has been sadly neglected, that too much ground has been wasted in open ditches and roadways is evident. Too many hogs and cows have been kept, more than the institution could support, and this means a lot of half fed and unprofitable stock. It has been necessary to cull out and butcher a lot of it and still further reductions must be made. In short the farm has not been doing its duty and it is going to take real effort to put it where it should be. The results this past summer have been gratifying and too much credit cannot be given the farmer, his assistant and the twenty boys who have worked often more than 14 hours a day to repair the damage that careless hands have wrought. The full benefit of their labor cannot be properly estimated until another year for much of the work was preliminary.

The horse and cow barns are in reasonably good shape and with the addition of the new cow barn that we built this summer should be sufficient for all our needs in that line. The new barn we built almost entirely with material already on the ground and is modern and substantial in every way. There are no funds available at this time to equip it but it will serve as a shelter for dry stock this winter and can be equipped next summer provided funds are available.

DRAINING AND CLEARING.

River bottom land is usually fertile, but it cannot be worked satisfactorily unless properly drained. During the summer the entire farm was carefully mapped by Engineer W. D. Gumare under the direction of State Hydraulic Engineer Chase, and complete plans made so that now we can go ahead with our work in an intelligent manner.

Good drainage of the farm has been impossible heretofore on account of Dillebaugh Creek which meanders through the farm something over 9000 feet. In fact the creek was practically a slough that afforded but little drainage and wasted according to the engineer's estimates slightly less than 16 acres of our best land. Our surveys showed that we could cut an absolutely straight canal from the county road on one side to the railroad bridge on the other side of the farm, eliminate 6,000 feet of distance, get proper fall and efficient drainage besides improving the looks and workability 100 per cent. We did not have sufficient funds to contract the work so with the aid of a few teams the farm crew tackled the job and finished 2000 feet of this canal which is 8 feet wide at the bottom, twenty at the top and six feet deep. We also filled in and have ready for crop next spring 2200 feet of the old slough. This work meant handling some 8,000 yards of dirt, a great deal of which had to be hauled from 200 to 500 feet and was accomplished with the expenditure of \$2,625.74. We are asking the legislature to give us sufficient funds to complete the remaining 1,000 feet of the canal and to fill in the remainder of Dillebaugh Creek. If these funds are available this coming summer and fall we can make the farm a joy to look upon and add fully \$10,000 to the value of the place.

Clearing.—For a number of years 53 acres of our best drained and most fertile land has grown nothing but a crop of huge stumps. During the summer we were able to clear slightly over 30 acres of this ground in excellent shape and before winter we will have this plowed and ready for a crop in the spring. We are asking the legislature for a small amount of money to finish this work early in the spring so that the entire parcel can be made to produce a crop the coming season. In spite of high prices we were able to clear this land for \$35.60 per acre.

Much of our fencing is not worth repairing and should be replaced during the coming year or two. It is our purpose to eliminate the patch work and useless cross fencing that now exists so that the farm will present a well kept appearance.

There is at present no fruit whatever on the farm and it is our purpose to start a carefully selected home orchard next spring on the new ground that is cleared, for this is the best drained and most suitable fruit land that we have. An abundant field of small fruits will also be planted. We are asking for a very small appropriation for this purpose.

We should have a tractor in order to work the farm efficiently. Bottom land must be worked quickly when it is ready and to feed horses that are idle fully half the year in order to do our spring work and harvesting is a shameful waste of money.

We are also determined to make use of the water that runs to waste through the farm for irrigation purposes before another year goes by. The State Hydraulic Engineer states that our plans are entirely feasible and

gives it as his judgment that the cost of doing so would be returned in a single season. We are asking a small appropriation to begin this work.

If our farm is to be made the model farm that it ought to be, we must have sufficient help to make its supervision efficient. It must be remembered that boys, young boys, must do the bulk of the work and that they come from environments foreign to farm life. They must be taught and carefully supervised if either the farm or the boys are to profit. Boys of the type that we have cannot be left alone with their work. At present we demand about three men's work of our farmer and pay him less than the ordinary farm hand is paid in this day and age.

The location of our buildings is slightly but needs some landscape gardening. We have taken the first steps toward working out a definite plan for the beautification of our grounds. H. E. Burdette, instructor in landscape gardening at the State College, spent several days at the school this summer and is now preparing plans for this work.

BUILDINGS.

The administration building, which was formerly the girls' building before the School for Girls was established at Grand Mound, is now used only for the offices and living quarters of the superintendent. This is a shameful waste of space and the building is really unfit for its present use. This building, though old, is in splendid repair and is really a better building than the brick buildings which were built much later. We are asking that this building be fitted up for the use of about fifty of the smaller boys (we have about this number under twelve years of age) so that they can be segregated from the older boys and receive the attention and instruction that should be given boys of that tender age. To do this it will be necessary to build a cottage large enough to accommodate the superintendent's family and the Board of Control.

Practically all of the buildings need painting. The concrete storeroom needs waterproofing. Roofs need repairing. Most of the interiors must be redecorated if they are to present even a livable appearance.

The two main buildings, as before stated, are unfit for the purpose for which they were intended and we do not believe that they can be remodeled in such a way that they will be much improved. No money should be spent on them other than to make them clean and to keep them from going to pieces until such time as the state can afford to discard them and erect buildings suited to the needs of the school. There are, however, some repairs that must be made. It has not been possible to do much work of this kind the past summer but with the approach of winter and bad weather we hope to take off a little of the curse.

The boys' dining room has been cleaned, redecorated and drains installed. New tables, new chairs and new dishes provided. The school rooms have been refloored, painted and decorated and are now quite presentable. Uniform and gun rooms have been provided in both buildings. The basement playrooms, the only place we have for our boys to spend their time in bad weather, have been made as clean and comfortable as it is possible to make them where it is necessary to crowd eighty or ninety boys into a 75x90 foot room.

The kitchen is a nightmare. To begin with it is cut up into four rooms or passage ways where supervision is impossible and where the cooks, the bakers and the dishwashers are stumbling over one another at every step. The equipment is next to nothing (with the exception of the bake oven) and cannot be arranged in such manner that even a modicum of efficiency can be obtained. A new range and a new sink have been purchased and will soon be installed. These will help materially, but nothing can really be accomplished until a stairway that cuts through the kitchen is removed, thus making one large room, and a floor that looks better than a barn floor. We simply must add also a steam cooker and a jacketed kettle that does not leak at every joint.

In "A" building a small play room has been fitted up for 30 of the little tots and placed in charge of a woman officer. This helps out in properly handling the little fellows but it is at best a makeshift.

The dormitories are in fair shape. We need new mattresses and some new springs very badly.

The boiler house is an eyesore and must be repaired and put in presentable shape.

The greenhouse must be remodeled to some extent before it can be of any practical use.

The shop row which was in the first place but a frame building plastered on the outside is in bad shape and must be repaired at no distant date.

The old building that stood at the rear of the shop row and which has been used for the past few years as a catch-all for junk has been torn down and the material used to build a modern brooder house of 1000 chick capacity and a laying house that will accommodate 500 hens. For the first time in many years the school has a nice flock of poultry in process of development and has also added some Belgian hares to the stock on the place.

Several outbuildings are badly needed, a machinery shed (farm), woodshed, plumbing shed and garage. These need not cost a lot of money, but should be substantial and sufficient for our needs.

We have not asked for money to do many things that are needed. We are willing to go slowly and especially at a time when demands upon the state are numerous and onerous, but I feel that I would not be doing my duty if I did not call attention to the crying need of a gymnasium. You will readily understand why I feel this way when you happen into our play rooms some rainy, disagreeable evening.

RECREATION.

No one questions the value of recreation, the right kind of recreation, and although we are limited in what we may do on account of facilities, we manage to have much that is worth while. It seems too bad indeed that the excellent band that the school once had was allowed to be broken up. Every dollar that a band costs is worth several dollars to the school and I cannot but believe that its demise was unwarranted. We began in a small way last spring, in spite of the fact that there was no money to hire an instructor, the rehabilitation of the band. It has been a hard struggle but recently the boys earned some money that is being used to hire a bandmaster for two hours every day and we hope that we will be allowed suffic-

ient money the next two years to provide a musical director. The three companies have taken a turn about for the last few months and have put on some splendid entertainments. These have been supplemented by feature films that were worth while. Two choirs have been organized and are winning favor at the chapel exercises and the shows.

OTHER ACTIVITIES.

During the summer many calls were made by farmers and the canneries for emergency help and where practicable the boys were permitted to assist. In this way the boys earned the expenses of their trip to Yakima, which amounted to over \$600, their trip to Puyallup and have a fund now on hand from which they are paying a bandmaster and other small items.

Besides this a crew of five boys cut over 300 cords of hard wood that is worth at least \$2,500, this, of course, for the school. Seven boys earned \$225 worth of dried prunes and picked over 800 bushels of apples, which will assist materially in combating the high cost of living. We also canned 80 gallons of cherries and 140 gallons of pears that represented the school's share of fruit picked on shares.

By these various activities the boys rendered a real service to their country in the matter of food conservation, reduced the running expenses of the school and provided themselves with certain things that were not chargeable to the State. The most pleasing feature of these activities, however, is the fact that only one boy out of more than a hundred different boys engaged, broke his trust.

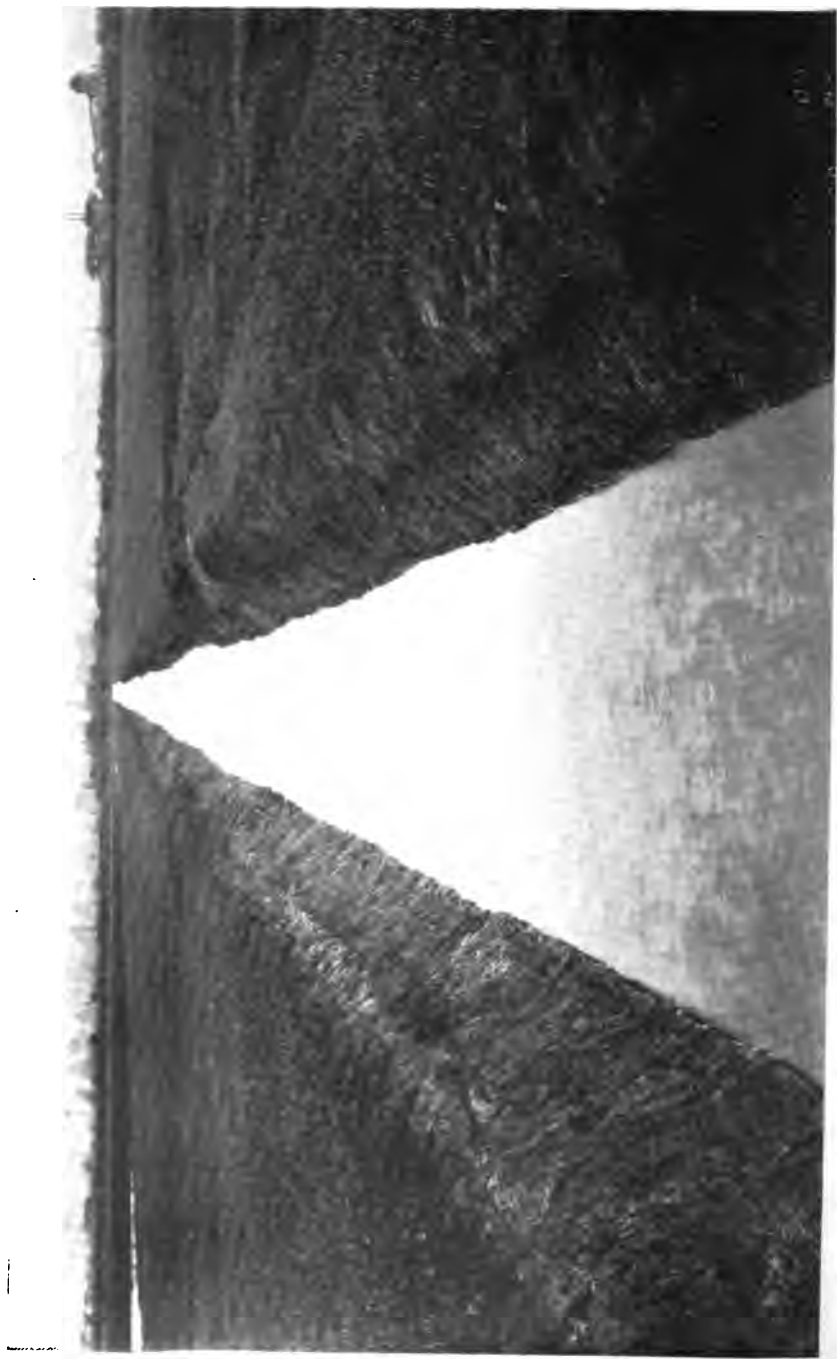
INTERFERENCE WITH SCHOOL DISCIPLINE.

For the good of the school there is one ambiguity or conflict in the law governing commitments to the Training School that should be straightened out. There are cases where the general juvenile law and the Training School law are confused and the courts release boys on court order after they have been in the school but two or three months. Naturally the boy himself is harmed, for it follows that if he can receive special favors through the intervention of friends or parents once, he thinks it can be done again and the natural course is to take another chance, but the greatest harm is done the remaining hundred and sixty boys. It wrecks any disciplinary system, creates unrest, starts every boy to agitating his parents "to see the judge." If the law does not give the court the right to remove boys the practice should be stopped, if it does the law should be amended.

DISPOSING OF PRODUCTS.

There is another law that is foolish in the extreme and works a hardship on all institutions and is contrary to all tenets of good business. Under the law an institution that has an excess of potatoes and a shortage of cabbage cannot trade the surplus potatoes for cabbage. Veal cannot be traded for fish or hay for grain. This means that the surplus of one crop must either be wasted or sold for cash that goes into the general fund while the institution goes short on what it needs. Not a year passes but that some crops are failures and others are abundant. It is mighty poor business not to trade what you can't use for what you need.





NEW DRAINAGE CANAL, STATE TRAINING SCHOOL.

To be specific. It costs the Training School, during the summer months, approximately \$70 a month to run the ice and cold storage plant. Last summer money was short and we cast about for some way of cutting down this cost. We were making several times as much ice as we could use but it cost just the same to operate the plant whether we made much or little ice. We had an opportunity to trade about \$100 worth of this surplus ice each month for butter. We could have run our plant and made \$30 per month but the Public Property Commission could not give us authority to make such an arrangement and not being able to stand the cost we shut down the plant.

PAROLE WORK.

This school has been just about fifty per cent efficient the past two years because practically all of that time it has been without a parole officer. If we cannot follow up our work for a time at least, after the boys leave the school, much of our effort here has been wasted. This point need not be dwelt upon for its truth is self evident.

Another matter should also be mentioned here. The parole officer (when we had one) was compelled to spend fully half his time in the capacity of a traveling guard. Naturally his parole work suffered. During the past seven months we have had neither traveling guard nor parole officer.

BIENNIUM OCTOBER 1, 1916, TO OCTOBER 1, 1918.

	Biennium.	During Biennium.
Boys October 1, 1916.....	125	
New boys received.....	284	
Boys returned from parole.....	63	
Boys returned from escape.....	76	
Boys paroled		274
Boys discharged		7
Boys escaped		103
Boys transferred		5
Boys at the end of the biennium.....		159
	548	548

COMMITMENT BY COUNTIES, 1916-1918.

Adams	1
Asotin	1
Benton	1
Chelan	5
Clallam	2
Clarke	6
Douglas	2
Ferry	2
Franklin	2
Garfield	1
Grant	5
Grays Harbor	20
Jefferson	1
King	22
Kitsap	5
Kittitas	8
Lewis	7
Lincoln	5
Pacific	4
Okanogan	1
Pierce	49
San Juan	1
Skagit	7
Snohomish	28
Spokane	50
Stevens	2
Thurston	3
Walla Walla	2
Whatcom	18
Whitman	10
Yakima	13

284

ESTIMATED VALUE OF WORK OF THE DEPARTMENTS FOR THE BIENNIUM
ENDING SEPTEMBER 30, 1918.

Machine shop	\$4,780 10
Carpenter shop	6,351 09
Shoe shop	3,971 12
Tailor shop	6,320 00
Farm	12,469 88
Laundry	7,751 67
Ice plant	370 00
Total.....	\$42,013 86

Respectfully submitted,

THOMAS P. HORN,
Superintendent.





INTERIOR VIEW ADMINISTRATION BUILDING, STATE SCHOOL FOR GIRLS.

STATE SCHOOL FOR GIRLS.

To the Honorable State Board of Control.

Gentlemen: It is with pleasure I submit to you the second biennial report of the State School for Girls.

I regret being unable to report the completion of all improvements for which we received appropriations from the last legislature, but owing to the immediate raise in prices the sum appropriated in each case proved to be entirely too small.

We were unable to build:

The addition to the administration building,
One new cottage,
Concrete walks and post lights.

We are asking for a new appropriation for each of these this year, also another cottage, making two cottages.

The good walks and lights are much needed for going to and from trains and cottages, in the evenings especially.

The only improvement completed is that of bulkheading the Chehalis river at the point where it was cutting into the farm and threatening to revert to an old channel running across the same.

Of the improvements now under way are:

Three bridges.

The power house and central heating plant which we hope to have completed and in operation by the first of the year. In order to make this possible the building had to be changed from a permanent to a temporary one with the exception of the foundation which is permanent.

The new entrance over the Granger hall will be installed this winter.

The greenhouse we hope to have completed for the spring planting.

We lost practically all of our early garden for want of rain—the second planting did well. The irrigation system for which we are asking would soon be paid for by the added returns from the gardens.

We do a large part of our own canning. The list for this fall may be interesting:

246½ quarts vegetables	60½ quarts raspberries
131 quarts tomatoes	164½ quarts jellies, jams and butters
306½ quarts cherries	304½ quarts fancy pickles and relishes
672 quarts prunes	1 barrel cucumber pickles
592½ quarts pears	41 pounds corn, dried
49 quarts plums	26 pounds prunes, dried
48 quarts rhubarb	

This makes it possible to serve home canned fruit three meals of each week on the girls' tables, aside from fancy pickles occasionally.

Our Berkshire pigs purchased in 1916 have proven a good investment. For the past year and a half they have provided all the fresh pork, ham and bacon used. Last winter at current prices, the hams and bacons cured, totaled approximately \$2,000.00 in value.

The consumption of fresh meat has been greatly reduced, as a large portion of this meat is used on the girls' tables. This winter we expect not only to cure a larger quantity of the pork, but also to market a number

of hogs, more than enough to cover the cost of butter, lard and mutton, which we now purchase.

Our herd of cows has not been profitable, and of the twelve cows we have, only three can be classed as good. At times it has been difficult to obtain enough milk to provide for the breakfast cereals.

We are greatly in need of at least twelve good dairy cows to replace the greater number of those we have. This number would not only provide an ample supply of milk, but we believe we could manufacture all the butter used. It will be impossible for us to care for an increased population with the cows we now have, and if more cottages are erected and no provision made for an increase in the herd, we shall have to purchase milk.

We have enough young stock ahead at present to supply practically all our meat for the coming year, everything but mutton which is shipped in once each month, and I hope at the end of the next biennium to be able to report that we have our own sheep.

The slaughtering and curing of the meat used has been a difficult as well as an uncertain matter, as we have no slaughter house, smoke house, or place for storing the cured products. We have made request in our budget for some inexpensive buildings for this purpose.

Nothing has added more pleasantly to the variety of the tables than the five stands of bees purchased last year. Though this year, owing to the unfavorable season, they produced no honey for the tables, the first year they produced more than enough honey to cover purchase price. In time our bees will solve the problem of furnishing at a reasonable cost the sweet foods craved by growing girls.

During the past two years our girls on parole have sent back to the school for their savings accounts the sum of \$2,536.17. We have invested the larger portion of this as follows:

Thrift stamps	\$83 25
War savings stamps.....	1,042 92
Liberty bonds	950 00

We are hearing and reading much these days of the "Occupation Cure for Shell Shock." Dr. M. Allen Starr, emeritus professor of neurology, Columbia University, states that "Coincident with the mental paralysis there is a physical depression which is manifested in many of the bodily functions. It is evident, therefore, that in order to restore the physical health a mental change must be brought about, and the mental cause producing the defect be removed."

The same is true of the girls who are sent to us, and as in the case of these men, so with our girls, there must be a radical change of thought and emotion. So long as the girl is going over and over in her mind former experiences which have caused her distress, she will not improve.

To try not to think is impossible. Negative resolutions are useless. A positive substitution of new ideas, new views, new interests, new occupations which will absorb the attention and fully occupy the mind, so as to leave no time for brooding, for memory, for painful thoughts, is the chief means by which to combat the mental depression. So it seems as if with our girls as in shell shock cases, as Professor Starr states, an occupation cure is the means to recovery.





VEGETABLES GROWN AT THE STATE SCHOOL FOR GIRLS.

To choose the proper occupation for the individual is the first step. There are many which offer attractions and many which can excite interest.

Outdoor garden work, raising vegetables, making walks and roads, pruning shrubs and trees, caring for poultry or squabs or pigs or cattle, are excellent occupations, under proper direction, for one type of mind.

For another type some more complex activity—printing on a hand machine, carpenter's work, upholstering, net or basket weaving, rug weaving, book binding, metal work, making jewelry is most useful—we have been unable to have any of these for lack of funds.

In our short summer courses we have found many with a taste or capacity for designing, stenciling, oriental embroidery, pottery and wood block printing, thus affording a higher type of mental occupation than one more purely physical.

The music was introduced as a short course but the results have been so marked, the special music is continued throughout the year.

Occupation, therefore, is to be regarded as an essential means for restoring the mental balance of our girls and just as essential as in cases of shell shock.

This occupation must be varied in individual cases; not kept up too long, but changed from month to month; so that one kind of work will not become tiresome and the interest flag. It must be skillfully and tactfully directed.

Efforts, at first imperfect, must be corrected and encouraged, the stimulus of competition with others must be invoked, and success must be rewarded.

Following is an outline of our credit system which is our method of designating the character growth of each girl. This is revised from time to time as the necessity arises. It is clearly understood by all that those in authority neither give nor take away; they only register the occurrences of each day by means of figures.

Each new girl entering is given 35 credits. Under the head of habit forming we have:

Honesty	1 credit
Punctuality	1 credit
Orderliness	1 credit
Courtesy	1 credit

By honesty I mean not simply honest in the sense of taking nothing not theirs, but honest in word, actions and in all ways.

The other items are:

Spirit	1 credit
Good influence	5 credits
Efficiency	5 credits
Effort	1 credit

Taking all of these in the broadest sense, I believe they cover everything that may arise.

When all 16 credits are earned each month, 2 additional credits are given.

For perfect school attendance 2 extra credits are given.

When school is not in session, 2 extra credits will be given for co-operation in farm and garden work.

It is possible for a girl to earn 20 credits each month the year round.

Where one continually loses until she is in debt, this indebtedness can be wiped out by three months of perfect credits. In addition to wiping out the indebtedness the 60 credits earned will be placed to her account.

With 150 credits a girl ranks as an honor girl and is eligible for parole within two or three months—when she has proven to us that she can hold them steadily.

The one thing in all this work is the constant firm belief that recovery is to follow—that the effort made will result in help to the worker, for unless her hope can be aroused and kept up, unless her confidence can be secured, the recovery will be slow and imperfect. Here the personality of those directing the cure is all important. Intelligent sympathy, not too emotional, a confident power in directing, a willingness to help, and a conviction of success which is contagious, these are the elements which will go far to aid in the achievement desired. "Faith is the substance of things hoped for and the evidence of things not seen."

MOVEMENT OF POPULATION BY COUNTIES.

COUNTIES	Present in Insti- tution October 1, 1916	Received by Com- mitment	Received by Return from Parole	Received by Return from Escape	Dis- charged	Paroled	Escaped	Present in Insti- tution October 1, 1918
Asotin.....		1						1
Chelan.....	1	1				1		1
Columbia.....		1				1		
Clarke.....	1	10	2			7	2	4
Clallam.....		2				1		1
Ferry.....	3		1			4		
Grays Harbor.....	6	2		1		4	1	4
Jefferson.....		1						1
King.....	24	22	11	5	1	32	6	23
Kitsap.....		2				2		
Kittitas.....	1	2		1			1	3
Lewis.....	3	8	3			4		10
Lincoln.....	2	1	1			4		
Okanogan.....		1				1		
Pend Oreille.....		2				2		
Pacific.....		2						2
Pierce.....	15	21	3	3	2	20	5	15
Skagit.....	3	4	3			6	2	3
Snohomish.....	7	9	3	2		10	4	7
Spokane.....	10	12	1	2		10	3	13
Thurston.....	4		2	1		4	2	1
Walla Walla.....	2		1			3		
Whatcom.....	8	8	2	3		8	3	10
Whitman.....	1	4	1			3		3
Yakima.....	7	21	3	3		13	5	16
Totals.....	98	137	37	21	3	140	34	116

MOVEMENT OF POPULATION OF PAROLED GIRLS.

On parole October 1, 1916.....	66	
Paroled during biennium.....	174	
Returned from parole.....	58	
Discharged from parole record, of age.....	41	
On parole October 1, 1918.....	141	
	240	240

AGES OF GIRLS PRESENT IN INSTITUTION OCTOBER 1, 1918.

Eleven	1
Twelve	2
Thirteen	3
Fourteen	12
Fifteen	17
Sixteen	24
Seventeen	23
Eighteen	21
Nineteen	9
Twenty	4
Total.....	116
Average age of girls in institution, 16 minus.	

TABLE SHOWING OCCUPATION OF GIRLS PRIOR TO COMMITMENT.

Girls in school at time of commitment.....	41
Living at home without occupation.....	21
Employed as clerk.....	4
Employed in cannery.....	2
Employed in factory.....	7
Employed in photo gallery.....	1
Employed at fruit packing.....	4
Employed at housework.....	24
Employed as laundress.....	1
Employed as nursemaid.....	1
Employed at office work.....	2
Employed as telephone operator.....	4
Employed as theater usher.....	1
Employed as typesetter.....	1
Employed as waitress.....	2
Total.....	116

STATEMENT SHOWING DOMESTIC CONDITION OF GIRLS IN INSTITUTION.

Father not living.....	12
Mother not living.....	19
Both parents dead.....	10
Parents separated or divorced.....	41
Parents living normally.....	34
Total.....	116

STATEMENT OF INMATES' FUND.

Balance in fund October 1, 1916.....	\$54 22	
Received during biennium.....	2,193 56	
Disbursed during biennium.....		\$2,138 13
Balance in fund October 1, 1918.....		109 65
	\$2,247 78	\$2,247 78

STATEMENT OF PAROLE FUND.

On hand October 1, 1916.....	\$152 39	
Received during biennium.....	2,536 17	
Disbursed		\$355 04
Balance in fund October 1, 1918.....		2,333 52
	<u>\$2,688 56</u>	<u>\$2,688 56</u>

STATEMENT OF MISCELLANEOUS FUND.

RECEIPTS.

1916		
Oct. 31	Northern Pacific Railway Company, refund account damage to syrup barrels in shipment.....	\$2 50
1917		
Feb. 7	Refund mileage paid for paroled girl's fare to Hoquiam.....	1 50
Feb. 7	Refund mileage paid for paroled girl's fare to Aberdeen.....	1 40
Mch. 12	Refund mileage paid, two girls, Centralia to Tacoma.....	3 10
Mch. 31	Carstens Packing Company, cow's hide, 55 pounds at 15c.....	8 25
June 25	R. L. Sargeant for service of boar.....	5 00
Oct. 18	Carstens Packing Company, for calf hide.....	90
1918		
Jan. 31	Refund, auto hire in transportation furloughed girl.....	2 50
		<u>\$25 15</u>

DISBURSEMENTS.

1916		
Nov. 10	Remitted to State Treasurer.....	\$2 50
1917		
Mch. 10	Remitted to State Treasurer.....	2 90
Mch. 31	Remitted to State Treasurer.....	11 35
July 10	Remitted to State Treasurer.....	5 00
Nov. 10	Remitted to State Treasurer.....	90
1918		
Feb. 10	Remitted to State Treasurer.....	2 50
		<u>\$25 15</u>

7





POTTERY MADE AT THE STATE SCHOOL FOR GIRLS.

**FARM REPORT FOR PERIOD COMMENCING OCTOBER 1, 1916, AND ENDING
OCTOBER 1, 1918.**

COMMODITY	Unit	Quantity	Value
Beans, lima.....	Pounds.....	23	\$1 84
Beans, string.....	Pounds.....	1,562	100 70
Beans, navy.....	Pounds.....	593	74 96
Beets.....	Pounds.....	3,118	62 36
Brussels sprouts.....	Pounds.....	842	73 51
Cabbage.....	Pounds.....	5,391	138 86
Carrots.....	Pounds.....	5,606	90 04
Cauliflower.....	Pounds.....	62	1 24
Celery.....	Bunches.....	46	1 15
Corn, green.....	Dozen ears.....	1,135	234 15
Cucumbers, table.....	Dozen.....	66	22 20
Cucumbers, pickle.....	Crates.....	469	32 70
Endive.....	Dozen.....	20	7 35
Greens.....	Crates.....	12	4 69
Kohlrabi.....	Pounds.....	1,552	32 01
Lettuce, head.....	Dozen.....	70	42 76
Lettuce, leaf.....	Crates.....	115	31 64
Onions, green.....	Dozen bunches.....	616	151 62
Onions, dry.....	Pounds.....	1,427	50 84
Parsnips.....	Pounds.....	3,990	71 02
Parsley.....	Pounds.....	5	4 90
Peas, green.....	Pounds.....	606	34 19
Potatoes.....	Tons.....	26	1,178 28
Pumpkins.....	Pounds.....	675	12 42
Radishes.....	Dozen bunches.....	390	96 99
Rutabaga.....	Pounds.....	3,484	60 69
Squash.....	Pounds.....	579	14 67
Swiss chard.....	Crates.....	1,629	54 15
Salsify.....	Pounds.....	551	60 85
Tomatoes, ripe.....	Pounds.....	1,219	60 79
Tomatoes, green.....	Pounds.....	2,707	68 80
Turnips.....	Pounds.....	369	7 36
Total garden products.....			\$2,877 73
Apples.....	Pounds.....	60	\$1 70
Cherries.....	Pounds.....	107	7 62
Currants.....	Crates.....	3	4 41
Gooseberries.....	Crates.....	2	2 96
Pears.....	Pounds.....	3,363	88 89
Prunes.....	Pounds.....	1,827	50 61
Plums, yellow.....	Pounds.....	30	90
Raspberries.....	Crates.....	3½	8 75
Strawberries.....	Crates.....	100	229 20
Total value fruit.....			\$395 04
Eggs.....	Dozen.....	2,281	\$939 52
Milk.....	Pounds.....	122,110	3,692 88
Chickens.....	Pounds.....	512	100 21
Ducks.....	Pounds.....	86	13 85
Rabbits.....	Pounds.....	640	104 64
Squabs.....	Pounds.....	5	11 68
Turkeys.....	Pounds.....	366	100 12
Beef.....	Pounds.....	994	134 31
Pork.....	Pounds.....	5,374	1,042 05
Veal.....	Pounds.....	919	12 17
Honey.....	Pounds.....	166	34 50
Total value dairy and poultry departments.....			\$5,585 98
Barley.....	Tons.....	4.3	\$25 80
Hay.....	Tons.....	78	1,485 00
Wheat.....	Tons.....	11.25	239 81
Forage and root.....	Tons.....	51.87	251 68
Total value forage crops.....			\$2,002 29

FARM REPORT—Continued.

SUMMARY	
Garden products.....	\$2,877 73
Fruit.....	395 04
Forage and grain.....	2,002 29
Dairy and poultry products.....	5,585 93
Total value farm products.....	\$10,860 99

Respectfully submitted,

MARY CAMPBELL,

Superintendent.

WASHINGTON STATE REFORMATORY

Sixth Biennial Report

OF THE

BOARD OF MANAGERS

For the Period Ending September
30th, 1918



Monroe, Washington
1918

BOARD OF MANAGERS

T. E. Skaggs, President.....Olympia
F. F. Swale, Vice-President.....Everett
G. Dowe McQuesten.....Olympia
W. H. Cochran.....Olympia

STATUTORY OFFICERS

Donald B. Olson.....Superintendent
N. S. McCready.....Physician
P. H. Raymond.....Chaplain





ADMINISTRATION BUILDING AND GROUNDS, STATE REFORMATORY.

SIXTH BIENNIAL REPORT OF THE BOARD OF MANAGERS OF THE WASHINGTON STATE REFORMATORY.

Olympia, Wash., Sept. 30, 1918.

His Excellency, Governor Ernest Lister, Capitol Building.

Sir: We herewith present for your consideration the report of the Board of Managers of the Washington State Reformatory for the biennial period commencing October 1, 1916, and ending September 30, 1918.

On July 1, 1918, at the close of his fifth year of service, Honorable H. R. King retired as a member of the Board, thereby creating a vacancy in the presidency as well as in the membership. Mr. T. E. Skaggs was elected president, but no one has yet been appointed to the board membership. Mr. King's retirement was a distinct loss. He took a deep interest in the work of the institution and his counsel was valued highly by his associates and by the superintendent, officers and inmates as well. He is a strong man of many sides such as is required in successful institution management. He served long and faithfully without compensation, impelled only by his love of service, and we anticipate that your excellency will experience considerable difficulty in naming a successor who will measure up to his standard.

There has been a marked decrease in the average population of the institution during this biennium. During the biennium ending September 30, 1916, the daily average maintained was 412.44 while it was only 247.29 during the present two-year period. Five hundred and thirteen were committed in the former biennium as against 363 in this. While the elimination of the saloon as a demoralizing element, improved industrial conditions and the war have been the large contributing factors in reducing the number of commitments, we believe that the institution and the parole department are entitled to a large share of the credit for the happy results obtained. More than seventy per cent of the young men released have made good, which we think is a highly gratifying showing. The report of the superintendent to which is attached reports of the various departments is very complete and valuable and we have printed it as a part of this report.

IMPROVEMENTS.

Farm Buildings.—An appropriation of \$7,500.00 was made for farm equipment and stock. In addition to small farm implements and tools a fine modern piggery and slaughter house are nearing completion. A new dairy barn to accommodate 50 cows will be erected before the close of this fiscal period.

Kitchen Equipment, etc.—A new tile floor has been placed in the kitchen, a cold storage plant with ice making machinery installed, and much needed kitchen equipment purchased. The kitchen is now complete, modern and sanitary and in keeping with the other units of the institution.

Oil Storage and Garage.—A brick garage has been constructed on the west side of the driveway back of the shop and store buildings. There has also been added an oil storage house, in which has been installed a three

barrel gas tank, with filling pump and three oil tanks of sixty-five gallons each. The garage is supplied with steam heat and water.

Land Clearing.—A large acreage was cleared and still more will be made ready for cultivation before the close of the present fiscal period. At the close of the last biennium one hundred fifty acres were in cultivation while on the date of this report two hundred twenty-five were in crop, making an increase in the cultivated area of seventy-five acres. The past two years have been very unfavorable for farming and the amount of produce has been disappointing. However, the total products amounted to \$32,900.93 as against \$25,295.83 in the previous biennium. We have not asked for any funds for land clearing during the next biennium for the reason that we believe more profit will result from the cultivation and intensifying of the present farm.

Stockade Wall.—The stockade wall has been made smaller and rearranged so that one less guard is necessary. The entire appropriation of \$1,000.00 has been used in this work.

General Improvements.—A large number of other improvements have been made. A roadway has been built from a point near the barns to the stockade wall and one from the entrance at the northeast corner of the grounds to the administration building, concrete sidewalks have been placed around buildings, steam pipes repaired and syphon attachments installed on all heaters, and numerous minor repairs and replacements made. A three and one-half ton Velle truck was also purchased.

Reservoir.—An appropriation of \$10,000.00 was made to construct a reservoir on the high point to the east and south of the main buildings. A reserve supply of water and greater pressure, both of which would be obtained by such a reservoir, are greatly needed. Plans and specifications were prepared but the funds were not sufficient to carry out the construction and connect the reservoir with the buildings. The project was abandoned and \$9,715.00 will revert to the treasury.

Transmission Cables and Switchboard Extension.—This appropriation was not used because of its insufficiency and the entire amount will revert.

Manual Training and Shop Equipment.—It was planned to install a modern shoe making plant and other shop machinery. Only a few minor things were purchased and almost the whole appropriation will lapse because prices were prohibitive.

Printing Plant.—This plant was not installed for the same reason as in other cases. We have not asked for a re-appropriation of the amount because it seems inadvisable to make the investment at the present time.

INDUSTRIES.

The reasons assigned by the State Board of Control for the development of profitable industries at the State Penitentiary are applicable to this institution. The same difficulties encountered in the former institution have made headway impossible in this. With the early close of the war in prospect the next two years should be sufficient time in which to map out a definite plan of procedure. The present law provides for paying labor in

the Reformatory and no legislation is required. We mean to devote our energies during the coming biennium to the task of laying the foundation for an industrial plant that will permit us to carry out the spirit of the law now in force.

In closing, we desire to thank your excellency for your courteous treatment of this Board and to express our appreciation of the valued assistance which you have rendered us in the discharge of our duties.

Respectfully submitted,

BOARD OF MANAGERS OF THE WASHINGTON
STATE REFORMATORY,

By T. E. SKAGGS,
President.

October 1st, 1918.

To the Honorable, The Board of Managers of the Washington
State Reformatory, Monroe, Washington.

Gentlemen: In presenting this our third biennial report of the activities of the Reformatory, we will of necessity repeat much which is already known to you, as you have received monthly reports of all work carried on. We will mention the material side of the work here first, beginning with the administration building.

This building houses all the employees of the institution. In the sub-basement the dining room, kitchen, reading room, pool table and general club quarters are located. On the main floor are all the offices; on the two upper floors are the sleeping rooms, bathing rooms, etc., for the accommodation of the employees. This building is kept up as to repairs and general condition in the best possible manner and at present, in first class condition.

Adjoining the administration building and connected therewith by a corridor is the cell building or as it is known, the main building. This building houses the inmates; in the basement there is located two batteries of heaters that warm the cold air after which it is passed through a screen of sprayed water to remove all the impurities; a large fan forces the air through the entire building, a fan installed in the attic draws all the impure air out of the building, so that it is a model for ventilation and pure air. There are four tiers of cells on each side of the building, facing outward, forty individual rooms on each tier, permitting accommodation for three hundred and twenty persons. There is a lavatory in each room, also wash stand with running water, single bedstead, stool, table, case for small articles and electric light, so that each room is complete and has all the necessary accommodations. The rooms, corridors and all parts of the building are kept scrupulously clean, wholesome and in first class repair.

The domestic building runs parallel with the cell block and provides room in the basement for shower baths for the inmates, laundry, refrigerator and store room for canned goods and preserves. On the main floor is located a barber shop, reading room where moving pictures are shown every Saturday night, also basket-ball and concerts, minstrel shows, etc. Adjoining this room the main dining room is located and on the extreme end the kitchen and equipment. On the second floor of the domestic building is a large room for band practice, a room for our library books, book

bindery, a large class room and six smaller rooms for classes; an office for the principal of the school, print shop and chapel in which are held religious services. On the upper floor of this building is a room where our medical supplies are kept which we call the dispensary. Adjoining is a fully equipped operating room for surgical operations and dental work. We have three large wards for those who are sick, a tubercular ward, a sick ward and a convalescent ward; hospital steward's office, diet kitchen, bath and toilet rooms and two large dormitories, also two office rooms for honor community organizations. These three buildings complete the housing accommodations of the population. Everything that can be done to make these buildings clean, put in good repair and kept in proper shape has been done and they are at present in fine condition.

Regarding the industrial plant, we have a power house fully equipped with two 250-horsepower Babcox and Wilcox boilers, heating tanks and all the necessary piping and two engines with direct connected dynamos, all in first class condition. We generate all the steam, light and power we use at the institution.

We have two large cement and brick two-story shop buildings well lighted and fully equipped for the comfort of the workmen; a well equipped carpenter shop, partly equipped machine shop, shoe repairing and all the necessary work for our own use. We have a roomy, well lighted tailor shop where all the clothing we require is made; suits, underwear, overalls, caps, etc.

Near our power house we have a concrete and glass hot house in which we grow tomatoes, cucumbers and flowers; we should have three more of similar size and construction.

All these buildings are enclosed with a sixteen foot wall with towers for observation. The men are kept inside these walls, put to work in the various shops, power house and inside gardens and in school until such time as we can trust them outside.

Outside the walls our efforts are directed in doing the farm work and clearing land. The State owns 329 acres, this includes all land included in building sites, grounds and roadways. We have cleared and put into crops the last two years over 100 acres; it has been slow and laborious work as the land was heavily timbered before it was logged off. We have not accomplished as much in this line as we expected two years ago; it would appear with all the help we have much more might be done, but as stated it is difficult land to clear. There is approximately 100 acres yet to clear.

The crops from this new land are disappointing and we realize that it will require two or three years of intensive cultivation to get the best crops. The soil is good but contains so much pitch and wildness that it will take time to subdue it; next year and from that time on the farm will produce fine results and be a great factor in reducing the cost of maintenance, as everything that is required for table use and stock feed should be raised on the farm. We have had to do considerable draining as the state property drains a large area outside the confines of the land it owns.

With the completion of the new cow barn which is under construction and new hog barn which is practically finished, we will have all the farm buildings necessary for years as the other buildings on the farm are all in good condition.

We raise all the pork we require, also milk, eggs and vegetables and expect in the near future to make all the butter and cheese necessary for our own use.

The question of employing men who are sent here, at work that will qualify each to engage in the vocation in which he has the greatest talent or desire to engage in is the big problem. This is always uppermost in our mind, for even if we did not consider the best interests of the men, our selfish interests would lead us to place them where they would enjoy doing the work as they would accomplish more and the question of supervision would be reduced to a minimum. As the accompanying table indicates, the different lines of work carried on here enable us to place men to their best advantage and the State. This institution is comparatively new, consequently, up to the present time it has been a matter of clearing land, constructing the various buildings, installing the equipment, etc. The plant is practically complete now and our principal industry will be in taking care of the farm, stock and such general work as is usual in an institution of this kind. It requires no small number to carry on this work; it is all done by the inmates, directed by the overseers.

Our population is greatly reduced as the movement of population report will show, so that the matter of establishing industries that might be developed to put the institution on a paying basis from a purely financial viewpoint is not bright at the present time, even if there was a law permitting the manufacture of products for sale, which on the contrary there is a law forbidding us to do so. Our only hope at present to reduce the cost of maintenance is our farm and from this time forward it will continue to contribute more each year as it is more highly cultivated and irrigated. In this connection I believe we can do more for the men here by teaching them farm work, fruit raising, taking care of stock, etc., so that when they are released they can immediately get employment in work that is always available and just the kind of labor this state requires.

We believe that we should do all we can to instruct men in the mechanical lines, especially those who are inclined in that direction, but as all who have been taught trades know it takes years to become fairly efficient and as the average length of time a man is confined here is one year much cannot be accomplished in teaching a trade. It requires some time to ascertain the trade each individual is best fitted for. After he is here some time and we learn to trust him we are anxious to put him at work outside the walls, so that we can get our own work done. Even with the reduced population in the future we can devote more time to shop work and at least give the men who desire to learn a trade a better opportunity and in time evolve a plan whereby we may establish one or more lines of industry, which may ultimately put the institution on a paying basis, which is the ideal condition, making better men and having it done by themselves.

We do not receive any skilled men as we did in the years past; the average age is younger and the average boy or young man sent is of a trifling, indifferent, indolent disposition. It is not a question of what kind of work they should do so much as it is a question of getting them to do any work. It appears they have never done any useful work before being sent here for any continuous time even when they had the incentive of being paid for it. We cannot expect a high degree of efficiency unless there is some material reward aside from the consciousness of doing what one ought

Repairs and Replacements, \$7,500.00.

We have used this appropriation for repainting our buildings; building new garage for trucks and auto, and connecting same up with steam and water; building roadway from near our barns to large stockade gate back of storehouse; building concrete sidewalks around buildings; repairing steam pipe lines and installing new syphon attachments on all our heaters, thereby effecting a big saving on our fuel bill. We have \$4,204.12 on hand of this appropriation, which will be necessary to complete improvements such as field fencing, draining and new roadways.

Repairs to Wooden Stockade Wall, \$1,000.00.

Our stockade wall has been moved so as to make our stockade smaller and in such manner that the force of guards could be reduced. It is now in good and substantial shape. We have used the entire amount of this appropriation.

Farm, Stock and Equipment, \$7,500.00.

We have practically completed our new hog pens and same will be shortly in use. We now will have a fine building, well ventilated and easily cleaned and flushed, as well as butchering house and office in connection; sewer has been built to connect hog pens with main sewer. We have under construction a new cow barn and will require all of the money in the appropriation to complete same.

Water Reservoir, \$10,000.00.

We have expended from this amount \$285.00 which was used in surveying and locating Water Reservoir; same being done by Mr. R. H. Thompson of Seattle. On account of scarcity of material and high cost of same, it was decided by your Board that this improvement should be deferred for the present.

Oil Storage Equipment, \$750.00.

We have built a new oil storage house and installed in same one three barrel gas tank with filling pump and three oil tanks of 65 gallons each. This will eliminate the wasting of oil as well as making more convenient the handling of same. We have spent \$673.49 out of this appropriation.

Refrigerating Plant, \$4,500.00.

A refrigerating plant has been installed and has been in operation for several months, giving satisfaction; it consists of one large box convenient to range and a double box opening into the butcher shop and store room, one of these is used for meats and the other for milk and butter; the machinery and ice making plant are located in basement. We have spent out of the appropriation \$2,817.71.

Signal System, \$250.00.

Signal system material has been purchased but same has not yet been installed.

Inmates' and Officers' Kitchen Equipment, \$4,653.00.

We have used this appropriation for installing dishwashing machines in both inmates' and officers' kitchens; to replace old range which was worn out; electric potato paring machine; dough mixing machine; steam cookers, as well as repairing and re-arranging the kitchen and putting in new tile floor, thereby bringing same up to date and making a model kitchen.

Land Clearing, \$4,000.00.

We have been devoting all time possible to the clearing of land and have cleared and placed under cultivation over 100 acres, as well as fencing same.

Motor Truck, \$3,000.00.

We have purchased a Vellie truck which has been in constant use hauling our wood from the depot to the power house as well as our supplies. This truck cost us \$2,975.00.

Manual Training and Shop Equipment, \$6,300.00.

On account of the high cost of machinery and the uncertainty of procuring same, it was deemed unadvisable to use this appropriation at this time and we have spent only a limited amount, namely \$27.31, leaving a balance in the appropriation of \$6,272.69.

Transmission Cables and Switchboard Extension \$3,500.00.

It is impossible to purchase this material at this time on account of the war as everything of this nature is reserved for government use.

Printing Plant, \$6,000.00.

This appropriation was not used for the reason that prices covering equipment are exorbitant at this time.

Library and Entertainment, \$2,000.00.

We have spent up to this time about \$356.86 out of this appropriation, mostly for express on films for our motion pictures and for books donated by many societies throughout this state as well as for magazines and papers for library and baseballs, football and general entertainment.

**REPORT OF INMATES' FUND FOR THE BIENNIAL PERIOD ENDING
SEPTEMBER 30, 1918.**

Balance October 1, 1916.....	\$619 47	Expended during period.....	\$4,052 94
Receipts during period.....	3,993 04	Balance September 30, 1918..	559 57
Total.....	\$4,612 51	Total.....	\$4,612 51

FINANCIAL STATEMENT FOR TWO YEARS ENDING SEPTEMBER 30, 1918.

APPROPRIATION	Amount	Expended in September	Total Expenditure 18 Months	Balance on October 1, 1918
Salaries and wages.....	\$82,000 00	\$2,106 33	\$40,225 48	\$21,774 52
Supplies, material and service.....	122,900 00	2,636 31	82,433 52	40,466 48
Repairs and replacements.....	7,500 00	960 57	3,295 88	4,204 12
Farm, stock and equipment.....	7,500 00	433 47	2,659 23	4,840 77
Repairs to W. S. wall.....	1,000 00	.....	805 79	194 21
Water reservoir.....	10,000 00	.....	285 00	9,715 00
Oil storage equipment, refrigerating plant, signal system.....	5,500 00	57 62	3,548 82	1,951 16
Manual training and shop equipment.....	6,300 00	11 31	27 31	6,272 69
Inmates' and officers' kitchen equipment.....	4,653 00	.....	4,650 11	2 89
Land clearing.....	4,000 00	101 95	1,644 53	2,355 47
Motor truck.....	3,000 00	.....	2,975 00	25 00
Transmission cables, switchboard extension.....	3,500 00	.....	.....	3,500 00
Library and entertainment.....	2,000 00	11 36	356 86	1,643 14
Printing plant.....	6,000 00	.....	.....	6,000 00
Totals.....	\$245,853 00	\$6,318 92	\$142,907 53	\$102,945 47

Average daily population, 18 months, 239.686.

Average daily per capita cost, 18 months, \$0.943.

GEORGE P. DUBUQUE,

Accountant.

October 1st, 1918.

Honorable Donald B. Olson, Superintendent, Washington State
Reformatory, Monroe, Washington.

Dear Sir: I hand you herewith the report of the assistant superintendent for the biennium ending September 30, 1918.

With but one thing in view, and that the betterment of the inmate, I strive to know each man and to so place him that he will be in an environment and under officers most likely to make him the better man.

During the past two years I have personally interviewed three hundred and sixty-three inmates. Through these interviews and conversations I have with the men from time to time I am able to judge pretty well what they are best suited to do and under what conditions they are most likely to progress.

Within a very few hours after the man reaches here he is taken before a Greeters' committee whose duty it is to familiarize all new arrivals with the rules of the institution. This committee is composed of four inmates, one representing work, one conduct, one library and religion, and one athletics and the Honor Tier.

The Honor Tier is composed of forty cells of the main cell block and they are occupied by men who, through diligent effort, have proven themselves worthy of maximum privileges.

The discipline of the institution is not enforced by severe punishment but by the deprivation of privileges. This system has been found very effective, as very few of the men care to be confined to their cells while others are enjoying the yard, picture shows and other entertainments we have from time to time.

All assignments of work are made through my office and at present over half the population, which has greatly depreciated in the past two years, is working outside the wall. During the biennium, out of an average of two hundred and fifty inmates per month I have maintained a monthly "trusty" average of ninety-eight men.

The physical descriptions and finger prints are all handled through my department and their taking, classification, and filing are no small item.

In conclusion I wish to express my appreciation to you and all of the officers who have cooperated with me in the work I have undertaken.

Respectfully submitted,

O. A. WHITRIX,
Assistant Superintendent.

October 1st, 1918.

Honorable Donald B. Olson, Superintendent, Washington State
Reformatory, Monroe, Washington.

Dear Sir: I hand you herewith the report of the activities of the department of Religion and Moral Education for the biennium ending September 30, 1918.

One of the very noticeable features in the preparation of our United States armies for the present war is the appointment of so many chaplains and Y. M. C. A. secretaries, and the institution of methods and systems of moral and religious instruction. The government has long come to realize that if the morale of the army is to be maintained it must be surrounded and permeated with the moral and religious atmosphere that these agencies inspire. Similarly so, we, who are engaged in the work of reclamation among the perverts of society are more than passively impressed with the truth that no work of real reform can be achieved if we ignore the moral and spiritual side of a man's nature. To build a worthy life the foundation must be established and of the right kind. The branchings of character are in proportion to the rootings of character in soil conducive of the best growth. The issues of life must be sweetened and purified at its springs for no stream is purer than the source from where it derives its origin. With this conviction firmly established in our minds we have left no effort untried in bringing these lives, with whom we have to do, into vital contact with the moral and religious impulses, inspiration and imperatives of the Christian religion. As chaplain of this institution I have always regarded this as my primary duty. In season and out of season, by systematized study, in private interview and more public discourse, I have ever sought to bring these lives in touch with the noble ideals of Christianity and have been ever insistent that no life, whatever may be its advantages or disadvantages socially or educationally, can be a well rounded or thoroughly matured character if these factors are ignored. So the man who has gone wrong because he has so long refused to allow his life to be governed and restrained by the elevating and wholesome idealism of the Bible or whose moral sense has been allowed to fall pitifully below the standard of his early training, needs to be brought back again to this fountain of noblest manhood. In the early weeks of the first offender's conviction and incarceration he is most susceptible to these influences, yearning for brotherly sympathy and the assurance that though he has fallen from the pathway of rectitude, he may yet become the man that in his better moments he desires to be. Here

is often born the impulse which, if assiduously followed, will result in his moral and social salvation.

This, then, is the work to which this department is pledged and though not wholly confined to that, for it has varied interests, I have pleasure in recounting its activities during the last two years.

SUNDAY SERVICES.

Our Sunday services comprise a morning assembly and in the evening a Christian Endeavor Society. The morning service is all that heart can wish of the reverential spirit and appreciation of the spiritual import of the hour. The decorum of the men compares favorably with any outside church congregation for real fervor; in participating in its exercises, we are usually beyond them. Our orchestra usually provides the opening number while assembling. We use an adapted ritual comprised of responsive reading and prayer, which gives the worshipper a part in the service. Our singing is led by a choir composed of men who meet once a week for a singing lesson. While occasionally favored by outside speakers of prominence, the chaplain usually does his own preaching. He aims at giving the gospel the broadest possible interpretation, as our congregation represents a great diversity of thought and religious belief. We avoid all creedal distinction and sectarian controversy and endeavor to present the religion of the Bible, which is large enough to embrace and satisfy all. Inmates of the Catholic faith have their religious interests cared for by the visiting priest, Father Kelly, who has rendered equally faithful service in his department.

The evening meeting is somewhat different in character. It is not so general and is confined to membership but the conditions of membership are such as to preclude no one. It is officered and worked entirely by the inmates. It has its own presiding and executive officers and the membership provides its own program. Topics of up-to-date and practical interests are discussed. Usually a couple of papers are written and read after which the meeting is thrown open for general discussion. This serves the double purpose of encouraging the art of self-expression and inducing the members to engage in lines of research and study otherwise neglected. We have a variety of musical and novel items in the service which makes it attractive and to it comes about one hundred and fifty every Sunday evening. In this connection also, we have a series of graded class work that takes up specific studies such as: American civics, comparative religion, Christian biography, English literature and Bible study. These take the form of round table conferences and are found not only enjoyable but richly instructive and conducive to studious habit. The chaplain often meets the boys in private, individual conferences, assisting them to solve their religious and social problems and giving general advice.

WEEK DAY ACTIVITIES.

The week day activities are numerous and diversified with sufficient variety to make it a fascinating work, never monotonous. To censor the incoming and outgoing mail takes considerable time, and often patience, but yields richly in the estimate of character et cetera one can arrive at through knowledge of the associations and social conditions reflected in the letters. This branch of the work has been exceptionally helpful in indicating certain

traits and characteristics that we have been able to meet and cope with as a result. Out of the mail often arises the necessity for further correspondence which the chaplain usually takes up. Some domestic or legal affair may call for several letters, thus making the chaplain's correspondence no small item in his work.

Every boy that comes to the institution is personally interviewed by the chaplain as soon after his arrival as possible. Here is established a mutual confidence and recognized relationship that is usually sustained throughout the boy's stay here. What unburdening of hearts and hopes and fears these interviews produce and how great is the light often shed upon the antecedent causes of the boy's delinquency, the divided home and the absence of parental training and love. After this careful study of the boy's early environment and social organization a diagnosis is made and such treatment recommended as the chaplain thinks the case may require. This, of course, is at the beginning of the boy's stay here. A similar process is engaged in at the close. Another interview is effected. A careful study of all the impressions and notes made in the interim, and consultation with the work, department and general records, together with a study of the crime, et cetera, all furnish the basis upon which recommendations to the Board of Parole are made.

LIBRARY.

Besides the usual office work the Chaplain supervises the library of nearly five thousand volumes and seeks to direct the boys in their choice of, and the cultivation of their tastes for the best things in literature. He must be and usually is an enthusiastic lover of books. This branch of the work cannot be too highly estimated as an essential factor in a well conceived reformatory. Good books and good magazines are of inestimable worth in producing fine ideals and incentives to worthy living. In this department we endeavor to direct the boys to the purest springs for the refreshment of their intellectual life. To this end we have arranged and classified the whole library, produced in our own print shop a useful catalogue, and initiated the card system of distribution used in the best libraries. Our collection of books, ranging from fiction to vocational works, is fairly good, though room for improvement remains. We are indebted to the Women's Clubs of the state and several individual donors for generous contributions of magazines and good library books.

BOOK BINDERY.

Adjoining the library we have a fairly well equipped book bindery. Here we make into books many of the better class magazines and re-bind hundreds of dilapidated library books, thus prolonging their usefulness. We make also loose leaf binders and repair the books of all the various offices.

PRINT SHOP.

Across the corridor from the bindery we have the print shop, another activity which claims much of my personal attention. Besides the printing of all the institution forms and letterheads, we print a little weekly

newspaper, the Index. Through scarcity of paper it has had to be reduced in size but its quality remains unimpaired. Edited and contributed to by the inmates, it fills a useful place in the institution life, eagerly read by the inmates for its local news and gossip and its resume of outside history. Our print plant has been in operation now for several years and some very necessary additions in the way of new type and equipment are greatly to be desired.

ENTERTAINMENT AND PICTURES.

This, too, comes under the supervision of this department and keeps it busy catering to this very essential side of institution life. Looked forward to eagerly all the week, the Saturday evening show is much appreciated. We aim at procuring the very best and most elevating pictures, and have in the main succeeded, through the generosity of the Progressive Picture Corporation, which keeps us well supplied with films. The Ford Educational Weekly also is a very vivid and instructive feature. An occasional entertainment is provided through the generosity of outside and sometimes home talent. Whole Chautauqua courses and many eminent speakers and lecturers have visited us. This phase of the work we feel meets a need in the institution's work that could not be easily dispensed with. The institution band and orchestra have always proved a valuable acquisition in this regard. Under the competent leadership of a visiting professor we have renderings of which we have been very proud.

Now, in conclusion, let me say these varied activities with the specific work of my ministry have been a labor of love and accompanied with much joy. It is impossible to tabulate all the work entailed as it is impossible to enumerate results. One thing I am convinced of and that is that it is all worth while. Such work has its compensation and fruitage. Many have gone out of the atmosphere thus created in the institution with a keener sense of their moral responsibility; a clearer vision of the possibilities of their manhood and their feet set toward a goal, the direction of which was first discerned while here. Not all make good, but we have tangible evidence and many letters, which say that thoughts of noble citizenship and elevated manhood were first inculcated during incarceration in this institution.

My report would be incomplete if I failed to mention the unfailing courtesy and sympathetic cooperation that I have at all times received at your hands. Also the very generous assistance rendered by Mrs. Olson, who has given freely of her time and energy to make this part of the institution's work a success. For all this, I am deeply grateful.

Respectfully submitted.

P. H. RAYMOND, Chaplain.

October 1st, 1918.

Mr. Donald B. Olson, Supt.,
Washington State Reformatory,
Monroe, Washington.

Dear Sir: The following biennial report is respectfully submitted showing the work done in the medical department of the Washington State Reformatory from October 1st, 1916, to October 1st, 1918.

The work of the medical department has progressed satisfactorily both in theory and practice.

During the biennium included in this report the institution has been free from contagious diseases, with the following exceptions: Syphilis, gonorrhoea and tuberculosis; these have been reduced to a minimum. In no case has any disease been communicated from one inmate to another.

Inspections of all dormitories, kitchens, toilets and bath rooms have been regularly made, and the food served to the inmates has been of good quality and properly prepared and served in sufficient quantity.

I have made frequent inspections of the dairy. This department is a credit to the institution; it is handled scientifically and satisfactory in every way.

The diet kitchen for the use of hospital patients is very satisfactory, and should be maintained.

During the past year we have lost by death two inmates, one due to chronic gastritis and paloric stenosis, and one to tuberculosis.

Only four inmates received the last year have been addicted to the use of narcotics. This shows the good results of the Harrison Anti-Narcotic Law.

The boys in my department are given an opportunity to do first aid work, which should prove beneficial to them in the future.

The services of the state dentist semi-annually would be a very great help in keeping the inmates in good health.

It is a pleasure to testify to the hearty cooperation of the heads of other departments.

I wish to extend thanks to Dr. Don. H. Palmer and Dr. George Swift, of Seattle, for their services during the past year.

The usual detailed statements are attached.

Respectfully submitted.

N. S. McCREADY, Institution Physician.

SUMMARY, FROM OCTOBER 1, 1916, TO OCTOBER 1, 1918.

Number of cases in hospital October 1, 1916.....	4
Number of cases admitted to hospital from October 1, 1916, to October 1, 1918	389
Number of cases discharged from hospital, cured.....	382
Number of cases discharged from hospital, improved.....	2
Number of cases remaining in hospital under treatment October 1, 1918.....	5
Number of cases died.....	2

LIST OF DEATHS FROM OCTOBER 1, 1916, TO OCTOBER 1, 1918.

Date	No.	Diagnosis	Died
5-29-18	2313	Tuberculosis	12 noon
7-23-18	2383	Acute gastritis and paloric stenosis	9 A. M.

**SURGICAL CASES TREATED AT THE DISPENSARY FROM OCTOBER 1, 1914,
TO OCTOBER 1, 1918.**

Abscesses	17	Lacerated side	4
Bruised knee	2	Lacerated eyes	2
Bruised arm	3	Old empyema	5
Bruised leg	2	Old fractured arm.....	16
Bruised finger	42	Old fractured knee.....	2
Bruised toe	6	Synovitis of wrist.....	2
Bruised hand	8	Cyst	1
Bruised feet	4	Sprain, wrist	52
Bruised back	3	Sprain, thumb	15
Bruised face	3	Sprain, fingers	51
Bruised ankle	8	Sprain, arms	21
Cyst in neck.....	4	Sprain, ankle	38
Carbuncles	31	Sprain, legs	5
Dislocated toes	2	Sprain, hand	43
Dislocated fingers	4	Sprain, toes	16
Enlarged glands	15	Sprain, feet	21
Infected feet	9	Sprain, shoulder	14
Infected fingers	57	Sprain, elbow	6
Infected nails	3	Sprain, back	12
Infected gums	5	Teno synovitis	1
Orchitis	3	Hypertrophied turbinate	3
Otitis media	11	Amputated finger	1
Inguinal hernia	1	Fissure anus	1
Nail in foot.....	1	Amputated toes	2
Ruptures	11	Necrosis of bone.....	1
Infected eyes	4	Carcinoma	1
Infected toes	6	Lipoma	1
Infected hands	34	Sprained muscles	124
Infected ankles	1	Sprained knee	15
Infected adenoids	1	Sprained side	14
Infected lips	3	Sprained neck	2
Infected face	2	Venereal warts	4
Infected arms	17	Varicose veins	2
Infected legs	2	Varicocele	12
Infected ears	1	Ulcerated tooth	27
Fistula	1	Circumcision	38
Fractured fingers	14	Corns	68
Golter	11	Canker sores	2
Hemorrhoids	33	Gum boils	3
Hernia	7	Gunshot wound	1
Ingrown nails	28	Blistered neck	2
Tooth extraction	6	Blistered foot	4
Lacerated neck	1	Blistered arm	4
Lacerated foot	13	Contusion, head	3
Lacerated toes	22	Contusion, elbow	1
Lacerated hands	53	Contusion, face	1
Lacerated fingers	117	Contusion, knee	2
Lacerated head	7	Contusion, side	9
Lacerated thumb	21	Contusion, shoulder	2
Lacerated legs	29	Contusion, foot	3
Lacerated face	24	Contusion, finger	25
Lacerated wrist	16	Contusion, toes	8
Lacerated arm	22	Contusion, hand	9
Lacerated eyelids	5	Contusion, wrist	11
Lacerated lips	9	Contusion, back	5
Lacerated nose	6	Contusion, arms	3
Lacerated scalp	8	Burned leg	8
Lacerated chest	4	Burned arm	9
Lacerated ears	8	Burned feet	10
Lacerated back	2		

SURGICAL CASES TREATED AT THE DISPENSARY—Continued.

Broken arches	7	Furuncles	21
Boils	32	Hog bites	3
Growth on ear	3	Colles fracture	1
Growth on head	2	Epistaxis	3
Growth on nose	2	Calazian	1
Ventral hernia	1	Strictured urethra	6
Warts	6	Tonsillotomy	32

MEDICAL CASES TREATED AT DISPENSARY FROM OCTOBER 1, 1916, TO OCTOBER 1, 1918.

Gonorrhoea	21	Myalgia	19
Herpes	22	Migraine	23
Indigestion	33	Neuralgia	14
Influenza	16	Neuritis	2
Jaundice	5	Nocturnal emissions	3
Lumbago	41	Orchitis	1
Syphilis	8	Osteomyelitis	1
Acute gastritis	28	Pyorrhoea	14
T. B. glands	4	Psoriasis	2
Tonsillitis	51	Palpitation of the heart	6
Torticollis	1	Pleurisy	5
Tuberculosis	5	Pediculosis pubis	9
Venereal	1	Pruritus ani	2
Anaemia	34	Plumbism	1
Arthritis	22	Phrangitis	3
Acne	34	Ringworm	2
Adenitis	22	Prostitis	2
Asthma	11	Scabies	2
Bronchitis	19	Sunburn	6
Chilblains	10	Sore feet	21
Conjunctivitis	46	Toothache	110
Gystitis	9	Tape worm	1
Coryza	64	Urticaria	2
Constipation	82	Ulcerated anus	1
Intestinal colic	28	Morphinism	9
Catarrh	18	Melancholia	3
Chancres	2	Mucouscolitis	1
Chapped hands	13	Malaria	1
Dermatitis	91	Neuralgia	5
Diarrhoea	13	Organic heart trouble	5
Dysentery	2	Palpitation	2
Duodenal ulcers	2	Pneumonia	1
Epistaxis	10	Rheumatism	5
Epilepsy	1	Acne	19
Eczema	5	Bruised testicles	12
Furunculosis	27	Bruised leg	15
Gon. arthritis	9	Bruised feet	13
Chronic gastritis	3	Cold	23
Headache	98	Fetid feet	9
Iritis	2	Otitis media	17
Urethral stricture	11	Sore throat	24
Vertigo	1	Nastitia	19
Asthma	4	Nephritis	19
Acute epidynitis	1	La grippe	19
Buboes	1	Earache	27
Bronchial asthma	3	Hysteria	3
Chronic constipation	9	Impetigo	2
Cervical adenitis	2	Angina pectoris	7
Intertrigo	3	Petit mal	3
Incontinence urine	3	Hay fever	7
Insomnia	11	Pediculus	9
Laryngitis	29		

**MEDICAL CASES TREATED AT THE HOSPITAL FROM OCTOBER 1, 1916,
TO OCTOBER 1, 1918.**

Chronic bronchitis	11	Biliousness	2
Anaemia	10	Abscess	6
Chronic gastritis	4	Pleurisy	4
Tonsillotomy	7	Contusion, side	1
Grippe	6	Headache	1
Angina pectoris	6	Otitis mediae	22
Circumcision	9	Petit mal	2
Fractured finger	1	Erysipelas	1
Tubercular (observation)	10	Influenza	3
Tuberculosis	1	Sore feet	1
Acute indigestion	8	Dermatitis	2
Arthritis	9	Quinsy	1
Coryza	54	Cardiac insufficient	1
Rheumatism	8	Asthma	1
Neurasthenia	6	Pylorous spasm	1
Sprained ankle	1	Lumbago	1
Gonorrhoea	3	T. B. (tuberculine injection)	1
Conjunctivitis	18	Ingrown toe nail	1
Tachyardice	2	Hemorrhoids	11

**SURGICAL CASES TREATED AT THE HOSPITAL FROM OCTOBER 1, 1916,
TO OCTOBER 1, 1918.**

Circumcision	13	Chronic utthritis	6
Fractured finger	4	Stricture, urethral	2
Fractured leg	3	Hemorrhoids	7
Growth on head	2	Foreign body in eye	2
Tonsillitis	2	Bullet wound	4
Ingrown toe nail	13	Abscess	2
Amputated finger	6	Bruised leg	2
Amputated toes	2	Bruised back	2
Lacerated finger	6	Bruised foot	2
Lacerated head	1	Chronic mastoiditis	1
Ulcerated tooth	5	Old arm fracture	1
Sprained knee	2	Goitre	3
Sprained ankle	6	Hernia	3
Sprained wrist	1	Otitis mediae	1
Teno synovitis of hand	1	Colles fracture	1
Plastis operation of foot	1	Infected face	1
Enlarged glands	5	Infected foot	1
Tonsillectomy	6	Varicose veins	1
Varicocele	4	Furunculus	1
Extraction of teeth	7		

October 1st, 1918.

Honorable Donald B. Olson, Superintendent,
Washington State Reformatory
Monroe, Washington.

Dear Sir: I hand herewith the report of the work done in the department of education and vocation for the biennium ending September 30th, 1918.

Educational work in reform schools has had few points of contact with the general system of education in the country. Its problems have been special and peculiar and has consequently made it difficult to find in the public school much of suggestive help. Solutions, however, have been arrived at; the results, whatever their imperfections may be, represent the most persistent and effective experiments in the domain of education. Work of this





TAILOR SHOP, STATE REFORMATORY.

kind has been sadly hampered by slow public recognition, the traditions of old prison systems, and inadequate service, but at last it has come to be recognized both by state and public as a sheer necessity. We feel that our own institution bears the impress of this changed attitude to a marked degree, and all things considered the state of Washington is by no means behind other states in the efforts it exerts in this direction.

Our school consists of six fair sized, airy, and well lighted class rooms, with an additional room that may be used for special studies. When in operation it has always been under the supervision of university graduates, men fitted by grace and gifts for this important work. For it must be remembered that what is required is not merely one who pursues cold pedagogical methods in a mechanical way, but one who is able to enthuse them with his own contagious personality, awakening dormant capacity and arousing slumbering ideals.

In such work there are several impediments which prevents from making, what may be superficially called, a brilliant showing. Among them is the short period of the average inmate's stay here, scarcely allowing time for really constructive work, in view of the limited hours that may be put into it, for the school is closed during the summer months and when in session devotes only the afternoons and evenings. The other obstacle is the lack of educational advantage the average inmate has enjoyed. Either through natural disinclination or domestic embarrassment many of the boys have not had a grammar school education. After working several years it is naturally difficult for the boy to get down to serious book study again, and the older he is the greater is his disinclination to take up the studies of the lower grades where he naturally belongs. Of course, there are other difficulties. Attempts have been made to conduct the course of study along the lines of the public school which has not always proved satisfactory, so effort is concentrated upon the three fundamental branches—reading, writing and arithmetic. If in the short time we have them in our hands we teach them to read orally, with some facility, write a legible hand and do mathematical work comparatively well, we feel that we have accomplished much in fitting the boy to take his place in the business of life more efficiently than before. Of course, a boy's attitudes in other directions are not ignored and as far as they are capable of development and we have the power to facilitate the same we do so. The past two years have witnessed persistent and successful efforts in this direction, and here will be briefly stated the phases of activity in which we have been chiefly concerned.

LITERARY EDUCATION.

Spoken of in this way to distinguish it from the other forms. Never did any age demand of its citizenship more insistently than this, a knowledge of the fundamentals of education. No condition in society is an excuse for the lack of it. One of the great imperatives of any system that simulates a reform school must have education as one of its principal factors. So each boy that is brought to the institution is questioned as to his educational status and if he has not received the equivalent of an eighth grade education he is invited, or rather advised, to do so afternoons or evenings, as his work

makes it convenient. This is not compulsory, but usually after one interview with the director of education the boy generally sees the necessity of it and gladly acquiesces. Under the direction of the educational director are inmate teachers whose educational attainments fit them eminently to take the place of teachers in the lower grades. One feature that receives special emphasis is the study of American civics, particularly with the inmates that are foreign born. Higher branches of learning have been engaged in among those capable, such as higher mathematics, shorthand, typewriting, and business law.

VOCATIONAL AND INDUSTRIAL.

With well equipped shops and competent directors this part of a boy's education has also been attended to. It is sometimes said that lack of education paves the way to such institutions as this, which in part is true. It is also true that many a boy finds himself here because he has never been taught the dignity of honest toil and productive labor. So that a boy shall not be utterly ignorant of the useful arts upon his return to civil life, opportunities to gain some knowledge are given of carpentry, painting, tailoring, blacksmithing, office work, hospital work, farming, gardening, automobile construction, plumbing and gas fitting, and horticulture. The farm provides useful and healthful occupation for many and, though with limitations, the other callings are well occupied. Considerable constructive work in the past two years has furnished opportunity in this respect. As previously intimated the time is too short to complete one's education in any particular branch, still many a boy who has learned but the rudiments of these callings here and cultivated a liking for it has followed it on the outside and is now doing well.

MILITARY DISCIPLINE.

This department believes in physical as well as mental well-being and to this end we have, at stated seasons, military drill under thoroughly capable leaders. Its reaction on the physical body and through that on the moral character is well worth consideration. One hour's vigorous exercise in the fresh open air has tonic value to those who participate. The effect is noticed in the improved carriage and vigor of mind as well as of body and is a wonderful aid to good discipline and produces alacrity in responding to the word of command and soldier-like precision.

ATHLETICS AND MUSIC.

Recreation is a necessity to well balanced personality, so athletic features, in season, furnish relaxation and result in much good for the inmates. We have first class basket-ball, baseball and football teams. Many visiting teams from nearby towns, schools and Y. M. C. A.'s have given us good games. Our own teams have lacked nothing in pep and physical courage due largely, of course, to regular living and habits that the institution requires and the abstention from many hurtful habits that unfit.

Music, too, holds its place in this great work. We have held singing classes and have never been wanting a good band and orchestra. We believe strongly in the refining and uplifting influence of music. These agencies

not only provide useful occupation and some education, but they have brought lots of good cheer and sunshine into what would otherwise have been grey, monotonous days.

All these agencies entail considerable thought, work and money, and we have no hesitation in saying that money or effort were never better spent and calculated to yield for the state a greater harvest of citizens clothed and in their right mind.

Respectfully submitted,
J. A. SWETT, Director of Education.

Table No. 1.
SHOWING STATISTICS OF REFORMATORY POPULATION FOR TWO YEARS ENDING SEPTEMBER 30, 1918.

MONTHS	Received from Courts....	Escapes Returned.....	Returned from Condi- tional Pardon.....	Returned from Parole....	Total.....	Deported.....	Pardoned.....	Conditional Pardon.....	Transferred to State Penitentiary.....	Transferred to Insane Asylum.....	Escaped.....	Died.....	Released at Expiration of Sentences.....	Paroled.....	Total.....
1916															
October.....	10	2		1	11	1			3		1			51	56
November.....	8	1		3	13			4			1			22	27
December.....	18			1	20			1	2		1			18	22
1917															
January.....	16			8	19					1		1		9	11
February.....	26		1	2	30			3		1				32	38
March.....	22	2		3	26							1		1	8
April.....	14			1	15			3						15	19
May.....	17	2		3	21			4						39	48
June.....	17	3		3	23						4				5
July.....	13	3		2	18			5		1	5			38	45
August.....	7	2		3	12		1		2		1			8	12
September.....	19		1		20			1	1		2			38	42
October.....	12			6	18	1			1	2				9	13
November.....	20			6	26	1		1			1		1		4
December.....	1				1			3	19		3			16	41
1918															
January.....	21	2		1	24				11		1			9	21
February.....	17	1		4	22				8						8
March.....	25			3	28			1	1					15	17
April.....	21				21									15	19
May.....	15			2	17			4						4	9
June.....	17	1			18			3	8					25	38
July.....	5	6			11				8		2			2	15
August.....	11			5	16						4	1		2	2
September.....	12			1	13		1		3	1	4			17	26
Totals.....	363	25	2	53	443	3	2	57	67	6	33	4	4	385	541

Table No. 2.

SHOWING CRIMES COMMITTED BY INMATES FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.

Abduction	2
Arson, first	1
Arson, second	1
Assault, first	2
Assault, second	13
Attempted burglary	1
Attempted grand larceny.....	1
Bigamy	3
Burglary	1
Burglary, first	3
Burglary, second	116
Carnal knowledge of a female child.....	7
Carnal knowledge of a male person.....	1
Forgery	6
Forgery, first	36
Forgery, second	1
Grand larceny	140
Grand larceny from person.....	2
Manslaughter	1
Larceny from person.....	1
Permitting his wife to lead life of prostitution.....	1
Perjury, second	1
Rape	3
Robbery (attempt)	5
Robbery	10
Sodomy	3
Uttering a forged instrument.....	1
Total.....	363

Table No. 3.

SHOWING NUMBER OF INMATES FROM DIFFERENT COUNTIES FOR TWO
YEARS ENDING SEPTEMBER 30, 1918.

Adams	3	Klickitat	2
Asotin	2	Lewis	18
Benton	3	Lincoln	1
Chelan	6	Okanogan	12
Clallam	6	Pacific	1
Clarke	10	Pierce	39
Columbia	1	Skagit	1
Cowlitz	1	Skamania	1
Douglas	1	Snohomish	12
Franklin	4	Spokane	57
Garfield	1	Stevens	3
Grant	1	Thurston	5
Grays Harbor	5	Walla Walla	8
Jefferson	1	Whatcom	10
King	112	Whitman	14
Kittitas	3	Yakima	19
Total.....			363

Table No. 4.

**SHOWING LENGTH OF SENTENCE OF INMATES FOR TWO YEARS ENDING
SEPTEMBER 30, 1918.**

MINIMUM	MAXIMUM	Number
Six months.....	One year.....	4
Six months.....	Two years.....	2
Six months.....	Five years.....	4
Six months.....	Seven and a half years.....	1
Six months.....	Ten years.....	5
Six months.....	Fifteen years.....	37
Six months.....	Twenty years.....	3
One year.....	Two years.....	2
One year.....	Three years.....	11
One year.....	Five years.....	4
One year.....	Seven and a half years.....	18
One year.....	Ten years.....	2
One year.....	Six years.....	12
One year.....	Eighteen years.....	3
One year.....	Twenty years.....	1
One year.....	Twenty-five years.....	17
One year.....	Five years.....	1
One year.....	Six years.....	1
One year.....	Ten years.....	3
One year.....	Fifteen years.....	9
One year.....	Fifteen years.....	154
Two years.....	Four years.....	1
Two years.....	Five years.....	2
Two years.....	Fifteen years.....	11
Two years.....	Ten years.....	1
Two years.....	Twenty years.....	1
Two years.....	Twenty years.....	1
Two and a half years.....	Fifteen years.....	1
Three years.....	Five years.....	5
Three years.....	Ten years.....	1
Three years.....	Fifteen years.....	6
Three years.....	Twenty years.....	3
Four years.....	Fifteen years.....	2
Five years.....	Five and a half years.....	1
Five years.....	Six years.....	2
Five years.....	Seven and a half years.....	1
Five years.....	Eight years.....	1
Five years.....	Ten years.....	5
Five years.....	Fifteen years.....	7
Six years.....	Twenty years.....	1
Not less than six months.....		5
Not less than one year.....		2
Not less than three years.....		1
Indefinite.....		7
Total.....		363

Table No. 5.

**SHOWING NUMBER OF INMATES IN REFORMATORY FOR TEN YEARS
ENDING SEPTEMBER 30, 1918.**

DATE	On Hand	Received	Released
September 30, 1909.....		119	
September 30, 1910.....		213	
September 30, 1911.....		296	
September 30, 1912.....		309	261
September 30, 1913.....		297	312
September 30, 1914.....	415	322	254
September 30, 1915.....	455	316	299
September 30, 1916.....	320	196	332
September 30, 1917.....	218	186	295
September 30, 1918.....	231	177	136
Total.....		2,435	

Table No. 6.

**SHOWING COLOR OF INMATES RECEIVED DURING TWO YEARS ENDING
SEPTEMBER 30, 1918.**

COLOR	Number
White.....	333
Negro.....	20
Chinese.....	1
Japanese.....	2
Indian.....	7
Total.....	363

Table No. 7.

**SHOWING AGES OF INMATES AT THE TIME OF SENTENCE FOR PERIOD
OF TWO YEARS ENDING SEPTEMBER 30, 1918.**

Fourteen	3	Twenty-five	12
Fifteen	3	Twenty-six	6
Sixteen	20	Twenty-seven	14
Seventeen	23	Twenty-eight	13
Eighteen	32	Twenty-nine	12
Nineteen	55	Thirty	3
Twenty	47	Thirty-one	1
Twenty-one	39	Thirty-two	2
Twenty-two	27	Thirty-three	1
Twenty-three	22	Thirty-five	1
Twenty-four	27		
Total.....			363

Average age, 22.182 years.

Table No. 8.

**SHOWING OCCUPATION OF INMATES PRIOR TO COMMITMENT FOR THE
PERIOD OF TWO YEARS ENDING SEPTEMBER 30, 1918.**

Auto drivers	19	Loggers	6
Bakers	9	Longshoreman	1
Barbers	3	Machinists	11
Blacksmiths	3	Mechanics	17
Brakemen	4	Miners	3
Cabinet makers	3	Musician	1
Carpenters	7	Nurses	2
Chauffeurs	10	Painters	2
Cigarmaker	1	Plumbers	2
Clerks	18	Porters	5
Cooks	13	Pressmen	4
Deck hand	1	Riveters	4
Driller	1	Salesman	1
Electricians	5	Shingleweavers	2
Engineers	6	Steward	1
Farmers	61	Students	5
Firemen	10	Tailors	2
Florist	1	Teamsters	14
Horseman	1	Walters	22
Laborers	82		
Total.....			363

Table No. 9.

**SHOWING THE RELIGIOUS BELIEFS OF INMATES IN THE PAST TWO YEARS
ENDING SEPTEMBER 30, 1918.**

Atheist	2	Episcopalian	11
Baptist	19	Lutheran	17
Campbellite	2	Methodist	74
Catholic	94	Mormon	2
Christian Scientist	6	Presbyterian	40
Christian	34	Unitarian	3
Church of God	7	Protestant	36
Congregationalist	4	None	12
Total			363

Table No. 10.

**SHOWING THE NATIVITY OF INMATES RECEIVED DURING THE LAST TWO
YEARS ENDING SEPTEMBER 30, 1918.**

Alabama	1	Michigan	10
Arkansas	1	Massachusetts	5
California	3	Nebraska	3
Connecticut	1	New York	11
Carolina	2	North Dakota	3
Colorado	7	Oregon	15
Delaware	1	Ohio	8
Iowa	8	Oklahoma	6
Illinois	27	Pennsylvania	9
Idaho	9	South Dakota	3
Indiana	2	Texas	7
Kansas	16	Tennessee	6
Kentucky	1	Utah	1
Louisiana	1	Virginia	9
Maryland	2	Washington	80
Minnesota	16	Wisconsin	10
Montana	4	Wyoming	3
Missouri	14		
Total			315

Table No. 10—Continued.

**SHOWING THE NATIVITY OF INMATES RECEIVED DURING THE LAST TWO
YEARS ENDING SEPTEMBER 30, 1918.**

FOREIGN BORN.

Australia	1	Ireland	1
Austria	4	Italy	5
Alaska	1	Mexico	4
Belgium	1	Norway	1
Canada	10	Poland	1
China	1	Russia	4
Denmark	1	Serbia	1
England	5	Spain	1
Greece	1	South America	1
Germany	3	Scotland	1
Total			48

Table No. 11.

**SHOWING AGE AND NUMBER OF INMATES AT TIME OF LEAVING HOME,
TWO YEARS ENDING SEPTEMBER 30, 1918.**

Fourteen	51	Twenty-two	3
Fifteen	22	Twenty-three	1
Sixteen	27	Twenty-four	3
Seventeen	29	Twenty-six	1
Eighteen	27	Twenty-seven	1
Nineteen	25	Twenty-eight	3
Twenty	14	At home	129
Twenty-one	9	Don't know	18
Total.....			363

Table No. 12.

**SHOWING THE NATIVITY OF THE PARENTS OF INMATES RECEIVED IN THE
LAST TWO YEARS ENDING SEPTEMBER 30, 1918.**

NATIVITY OF FATHER	Number	NATIVITY OF MOTHER	Number
America.....	198	America.....	218
Austria.....	8	Austria.....	9
Belgium.....	1	Canada.....	15
Canada.....	19	China.....	1
China.....	1	Denmark.....	4
Denmark.....	2	England.....	11
England.....	18	France.....	2
France.....	5	Finland.....	1
Finland.....	1	Germany.....	14
Germany.....	16	Italy.....	7
Italy.....	8	Ireland.....	11
Ireland.....	14	Japan.....	1
Japan.....	1	Mexico.....	3
Mexico.....	3	Norway.....	9
Norway.....	6	Philippine Islands.....	1
Philippine Islands.....	1	Russia.....	8
Russia.....	9	Serbia.....	1
Serbia.....	1	Spain.....	1
Sweden.....	11	Sweden.....	9
Switzerland.....	1	Wales.....	1
Wales.....	1	Don't know.....	36
Don't know.....	48		
Total.....	363	Total.....	363

Table No. 13.

**SHOWING HABITS OF INMATES PREVIOUS TO CONVICTION FOR TWO
YEARS ENDING SEPTEMBER 30, 1918.**

Liquor	84
Smoke—	
Cigars and pipe.....	30
Cigarettes	294
Tobacco—	
Chewing	52
Snuff	16
Drugs	13
Lewd women	182
Gambling	59

Table No. 14.

SHOWING DOMESTIC RELATIONS OF INMATES FOR TWO YEARS ENDING SEPTEMBER 30, 1918.

Father dead	64	Both living	184
Mother dead	48	Unknown	11
Both dead	56		
Total			363

Table No. 15.

SHOWING THE EDUCATION OF INMATES WHEN RECEIVED FOR THE PAST TWO YEARS ENDING SEPTEMBER 30, 1918.

First	2	Eighth	79
Second	7	Ninth	33
Third	13	Tenth	12
Fourth	25	Eleventh	4
Fifth	42	Twelfth	2
Sixth	51	College	3
Seventh	69	Illiterate	21
Total			363

Average education a little better than sixth grade.

Table No. 16.

SHOWING DOMESTIC RELATIONS OF INMATES FOR THE PAST TWO YEARS ENDING SEPTEMBER 30, 1918.

Father dead	64	Both dead	56
Mother dead	48	Both living	181

Table No. 17.

SHOWING SOCIAL RELATIONS OF INMATES FOR THE PAST TWO YEARS ENDING SEPTEMBER 30, 1918.

Single	308	Divorced	3
Married	52		
Total			363

Table No. 18.

SHOWING INMATES WORKING AND IDLE FOR THE PAST TWO YEARS ENDING SEPTEMBER 30, 1918.

Working	139
Idle	224
Total	363

Table No. 19.

SHOWING MONTHLY REPORT OF TRUSTIES FOR THE PERIOD OF TWO YEARS ENDING SEPTEMBER 30, 1918.

October, 1916	107	October, 1917	71
November, 1916	126	November, 1917	87
December, 1916	110	December, 1917	76
January, 1917	112	January, 1918	54
February, 1917	107	February, 1918	105
March, 1917	90	March, 1918	81
April, 1917	125	April, 1918	107
May, 1917	90	May, 1918	101
June, 1917	101	June, 1918	105
July, 1917	92	July, 1918	110
August, 1917	98	August, 1918	110
September, 1917	74	September, 1918	98
Total		2,337	

Table No. 20.

SHOWING AVERAGE MONTHLY POPULATION FOR TWO YEARS ENDING SEPTEMBER 30, 1918.

Year	MONTH	Popula- tion
1916	October.....	318.5
	November.....	263
	December.....	260.5
1917	January.....	265
	February.....	270
	March.....	271
	April.....	287.5
	May.....	251.5
	June.....	253.5
	July.....	263.5
	August.....	236
	September.....	250
	October.....	219.5
	November.....	234.5
	December.....	221.5
1918	January.....	212.5
	February.....	228
	March.....	243
	April.....	239.5
	May.....	247.5
	June.....	248
	July.....	231
	August.....	239
	September.....	242.5

Table No. 21.

SHOWING PLEAS OF INMATES FOR PERIOD OF TWO YEARS ENDING SEPTEMBER 30, 1918.

GUILTY	321
Not guilty	42
Total.....	363

Table No. 22.

**SHOWING THE GRADE STANDING OF INMATES FOR THE PAST TWO YEARS
ENDING SEPTEMBER 30, 1918.**

DATE	First Grade	Second Grade	Third Grade
October, 1916.....	179	82	15
November, 1916.....	168	80	15
December, 1916.....	164	80	16
January, 1917.....	155	102	18
February, 1917.....	186	107	19
March, 1917.....	140	118	17
April, 1917.....	143	123	15
May, 1917.....	108	135	14
June, 1917.....	128	128	18
July, 1917.....	89	128	22
August, 1917.....	108	107	24
September, 1917.....	87	110	21
October, 1917.....	98	103	27
November, 1917.....	103	117	26
December, 1917.....	93	95	17
January, 1918.....	94	102	24
February, 1918.....	102	114	19
March, 1918.....	96	131	17
April, 1918.....	99	123	24
May, 1918.....	99	137	18
June, 1918.....	102	115	15
July, 1918.....	96	124	10
August, 1918.....	102	128	14
September, 1918.....	97	123	11
Average.....	115.83	112.9	18.16

Table No. 23.

SHOWING DISTRIBUTION OF POPULATION SEPTEMBER 30, 1918.

Animal husbandry (general)....	3	Hospital attendant	1
Auto truck helpers	3	Ice plant men	2
Bakers	2	Laborers	47
Barber	1	Land clearing	20
Blacksmith	1	Laundry checker	1
Bookbinder	1	Laundry drier	1
Bookkeepers	2	Laundry ironers	3
Butcher	1	Laundry washer	1
Carpenters	7	Librarian	1
Chauffeurs	2	Milkers	2
Clerks	11	Painters	2
Clerk (dispensary)	1	Photographer	1
Compositors (print shop).....	3	Plumbers	3
Cooks	8	Porters	21
Dishwashers	3	Poultry man	1
Editor	1	Pressman (print shop).....	1
Electricians	2	Pump man	1
Engineers	2	Shoe repairer	1
Engineer (assistant)	1	Stenographer	1
Firemen	4	Tailor	1
Garage man	1	Tailor (apprentices)	15
Gardeners (landscape)	5	Teamsters	4
Gardeners (truck)	19	Tinsmiths	2
Gate tender	1	Vegetable men (kitchen)....	4
Hog keepers	2	Waiters	6

Total..... 231

October 1st, 1918.

Honorable Board of Managers,
Washington State Reformatory,
Monroe, Washington.

Gentlemen: The following is the biennial report for the parole department ending September thirtieth, nineteen hundred eighteen.

The parole department has taken the stand that we are dealing primarily with the man and not with his crime, for when he is paroled he is supposed to have paid the penalty for his crime in a measure, and is deserving of a chance to rehabilitate himself. His crime may be his only serious mistake, or it may be only one of many similar ones, and whichever it is, there is always a chance—and generally a keen desire—for reformation in the heart of the individual. A man may be very vicious of character, and—yet, possibilities for reform may be greater than those of the one who is only guilty of pilfering in a small way; or occasionally one whose failure on the outside was his stupidity and lack of brains. Such a one is the hardest to deal with as there is no fountain of "gray matter" to supply such a deficient one. In the latter mention I believe our superior courts err in sending such a one to a penal institution. They have considered the crime and not the deep-seated cause which was the mother of the crime; or they would have sent such a one to the hospital. The pilferer comes next, and in these cases is where the parole system is most valuable; but final releases should not be too hastily granted. To keep such ones employed and, at the same time, crowd them into better environments, is the only hope for redemption; and unless such a course is followed, the spark of manhood which may have been kindled, by the long months of incarceration, is quickly extinguished, and the deterrent effect upon them by their former confinement is lost, and they are returned again and again as parole violators. In such cases the parole system has failed.

The requirements of the paroled men are the same to one and all—no favorites or pets—and, while it is humanly impossible to think of some in the same degree as you do of others, you can be impartial and not show your likes and dislikes. As formerly stated, I believe that the vicious fellow more frequently makes good than any other class; for once he is converted to the proper way of thinking, he generally has both the intelligence and stamina, which are conducive to a successful career.

The parole system is confronted by would-be friends of inmates who endeavor to secure the premature release of the incarcerated. This practice is very harmful to the ones they intend to benefit, as it keeps them in an unsettled condition; and so long as that state of mind exists, little can be accomplished.

The writer has known where "lawyers," for a monetary consideration, have purchased such a course. We see them in our police courts—not there for the good of their clients or society, but for personal gain only. Such a practice is a shame to the profession and should not be tolerated by the bar; for, every time they secure the acquittal or release of a guilty offender, they only advance him in his criminality and misery—pushing him out into the world an added burden to the police and guardians of society, removing the day and chance of reformation just that much further away. Those ac-

quainted with prison work can cite innumerable cases and know the curse of such practice.

While the penal institutions are entrusted to various appointed agents of the state, the whole responsibility does not devolve upon these agents alone, but upon every citizen of the commonwealth. These institutions belong to the people and every citizen has a duty towards them which he cannot well afford to shirk. Every employer that gives employment to a paroled man should have an interest far more vital than the profit which he hopes to make from his labor; for the taxpayer will have the bills to pay and it is to his interest, if for no other reason, to help those on whom fate has imposed the severest test; and, in an unguarded moment, have accepted the inevitable defeat unchallenged, because there was no one who seemed to care or offered a helping hand. We wish to thank the many friends and employers throughout the state for their assistance to the paroled men.

There is a very high patriotic feeling among most of the men and many have expressed the desire to enlist. We have over one hundred in the Allied service.

The chief parole officer puts in about twenty-three days a month on the road among the paroled men, so that a very careful check is kept of each man. About one thousand letters are written each month by myself and Mr. Laizure, my assistant, who is a very capable man in this line of work, and his untiring efforts have contributed greatly to the success of the parole department.

The finger prints of men received at the institution are classified, filed and identifications are made by this department in conjunction with the bureau of identification of the Washington State Penitentiary, at Walla Walla.

The following tables or statistics will indicate something of the work accomplished; said statistics showing the disposition of all inmates who have been, or are now, incarcerated in this institution, from number one to number two thousand four hundred forty-two.

Disposition.	Number.	Per Cent.
Men now in institution.....	225	9.21
Men now on leave of absence at Orting, Wash.....	6	.25
Men now on parole.....	534	21.87
Paroled and case closed at expiration maximum.....	11	.45
Paroled and sent to Washington State Penitentiary while on parole, case closed.....	50	2.05
Paroled, in other institutions, case closed.....	17	.70
Died on parole	21	.86
Committed suicide on parole.....	2	.08
Enlisted in army or navy and killed while on parole.....	3	.12
Paroled, enlisted in Canadian army, case closed.....	1	.04
Drowned while on parole.....	3	.12
Deported, case closed	1	.04
Paroled to be released to other institutions.....	1	.04
Paroled, bad case of tuberculosis, case closed.....	1	.04
Paroled and hung at San Quentin, case closed.....	1	.04
Paroled, re-sentenced, returned and given new number, case closed	7	.29
Released to military authorities.....	6	.25
Escapes, not caught	42	1.72
Escaped and killed by posse.....	1	.04
Drowned while escaping.....	2	.08
Escaped, murdered three people, committed suicide.....	1	.04
Transferred to Washington State Penitentiary.....	290	11.88
Transferred to Medical Lake	14	.57
Transferred to Sedro Woolley	2	.08
Transferred to Western State Hospital, Stellacoom.....	2	.08
Released at expiration maximum.....	27	1.11
Released and entered as new member, second sentence.....	1	.04
Released to other institutions.....	4	.16
Released to federal authorities.....	1	.04
Released on order of court.....	2	.08
Extradited	1	.04
Deported	70	2.87
Pardoned by the Governor.....	17	.70
No record why case closed.....	1	.04
Died in the institution.....	13	.53
Final discharges	1,061	43.45
Total.....	2,442	100.00
Highest consecutive number 2,442. Population 225.		

During the biennium 420 men have been paroled, of which 70.88 per cent have complied with the rules without serious infraction thereof.

Respectfully submitted,

J. HOWARD SHATTUCK,

Chief Parole Officer.

Honorable Board of Managers,
Washington State Reformatory,
Monroe, Washington.

October 1, 1918.

Gentlemen: The following named men are eligible for the honor list, as they are now in some branch of the United States service:

641 William Brown	1845 Charles E. Berry
691 Jesse Clapp	1863 Floyd Swing
714 George Fargo	1865 L. P. Grout
825 Joe Mayouck	1870 Rex Brown
836 Russell Evans	1895 Ben Job
1097 Walter Ollison	1897 Dan Kelly
1158 George E. Smith	1912 Claude Thompson
1207 A. J. Thompson	1915 Charles Bunch
1266 Frank Gay	1929 Albert Shannon
1290 James Slaughter	1962 Ben Dewey
1835 James Pierce	1965 Dana Bradway
1880 George Rhinehart	1974 O. D. Stites
1467 Ed Arvin	1979 Arthur Burke
1506 Ed Renfroe	1999 Francis Bartlett
1518 Charles Frye	2000 Harry Kirkham
1532 J. F. Olson	2003 Herbert West
1538 Leonard Watson	2008 O. O. Walcott
1590 Charles Hogan	2009 J. B. Denegree
1622 Edmond Conklin	2011 E. R. VanVickle
1627 Pearl Allen	2014 Antonio Perfidio
1640 Fred Martin	2036 H. C. Wilson
1659 C. E. Smith	2040 Donald Laney
1665 Ivin Rishell	2052 Edgar Warner
1699 Willard Ero	2055 A. A. Batistte
1708 J. H. Landry	2065 Ralph Holland
1717 F. Recto	2078 Robert Hanson
1718 David Griffin	2089 J. J. Bruner
1745 Arthur Morris	2096 George Denison
1754 S. D. Merrill	2109 Neil W. Neilson
1765 Peter Kinney	2118 Montgomery Stafford
1772 Harry Scheuck	2131 George Klein
1778 Edward MacMillan	2143 Charles Green
1790 Albert Benson	2170 Joe Koenig
1814 Sigmond Giese	2172 Harry Williams
1817 Harry Hess	2184 Tom French
1834 Prince Robinson	2230 Otto Mills
1837 Herbert Dietrich	2234 Harry Fredericks
1844 James Miller	

The following named men are eligible for the honor list, as they are now in the Canadian service:

24 Leo Payne	1567 A. C. Skinner
105 John Sias	1574 Robert Hope
384 W. J. Higgins	1598 W. J. Parkhurst
775 Fred Lane	1657 H. A. Edwards
1250 George Gray	1721 Fred Turpin
1257 Charles Bondon	1798 Clarence Camp
1317 John Holliday	1809 Joe Thomas
1382 Arthur LeFebvere	1829 Malcolm MacGibbon
1453 J. E. Snell	1847 Ray Hewitt
1517 Bert Harrison	1938 A. N. Hazeltine
1549 Ed Greer	2190 Albert Watt

Respectfully submitted,

J. HOWARD SHATTUCK,
Chief Parole Officer.

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ANNUAL STATEMENTS
OF THE
SAVINGS AND LOAN
ASSOCIATIONS

AUTHORIZED TO DO BUSINESS
IN THE
STATE OF WASHINGTON

1918-1919

ISSUED BY
C. W. CLAUSEN
State Auditor

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FOREWORD.

The prosperous condition and the continued growth of the Savings and Loan Associations of the State of Washington are apparent from the statements published herein.

The people, especially of the cities, are commencing to appreciate the service rendered by the modern, conservative association, and while the rate of dividends has been reduced in several instances, it seems to have stimulated the flow of money to these institutions, "Safety First" being the order of the day.

The high price of labor and material have retarded building activities, otherwise the assets of these associations would have shown a much greater increase, as a large number of the associations have been compelled to turn money away, for lack of demand by borrowers.

The public are slow to grasp the benefits of installment loans and education along these lines will bring results when normal building conditions return.

The last Legislature amended the law in accordance with my recommendations of a year ago. I now believe we have the best Savings and Loan Statute in the country, giving ample security to the investor, guaranteeing fair treatment to the borrower, and fixing definite and sufficient penalties for violation thereof.

The average rate of dividends earned during the year was 6.4 per cent.

We had entitled to do business in this state:

June 30, 1914,	21 Domestic Associations;	3 Foreign
June 30, 1916,	33 Domestic Associations;	3 Foreign
June 30, 1917,	39 Domestic Associations;	3 Foreign
June 30, 1918,	37 Domestic Associations;	3 Foreign
June 30, 1919,	39 Domestic Associations;	3 Foreign

Number of Subscribing Stockholders in Domestic Associations:

June 30, 1914.....	16,420
June 30, 1916.....	39,520
June 30, 1917.....	46,318
June 30, 1918.....	39,944
June 30, 1919.....	47,365

Assets Domestic Associations:

June 30, 1914.....	\$7,877,467	14
June 30, 1916.....	12,077,727	54
June 30, 1917.....	14,444,177	72
June 30, 1918.....	10,287,315	12
June 30, 1919.....	13,334,753	12

The falling off from 1917 to 1918 was due to the conversion of the Washington Savings and Loan of Seattle to the Washington Mutual Savings Bank with assets of \$6,354,280.07.

The membership fees collected during the past year amounted to \$101,626.66.

There were two associations formed since the last report, one in Seattle, the Trades Union Savings and Loan Association, which has had a wonderful

growth, accumulating almost \$160,000.00 in a few months, and at this date, September 30th, more than twice that amount; the other at Yakima, called the Liberty Savings and Loan Association, which starts out with good prospects in that active and progressive section of the state. I bespeak for both of them the success which the activity and devotion of their officers deserves.

The fees collected from the associations entitled to do business in this state for the coming year amount to \$5,303.65, sufficient to meet the appropriation made by the Legislature for examination purposes.

Examinations are proceeding satisfactorily and better results are being obtained than under the old plan.

Respectfully submitted,

C. W. CLAUSEN,
State Auditor.

BUILDING, LOAN AND SAVINGS ASSOCIATIONS

**AUTHORIZED TO DO BUSINESS IN THE STATE OF WASHINGTON FOR THE
YEAR ENDING AUGUST 31, 1920.**

STATE ASSOCIATIONS.

ABERDEEN SAVINGS AND LOAN ASSOCIATION, Aberdeen, Washington.
SECURITY SAVINGS AND LOAN SOCIETY, Aberdeen, Washington.
SKAGIT COUNTY SAVINGS AND LOAN ASSOCIATION, Anacortes, Washington.
NEW WHATCOM BUILDING AND LOAN ASSOCIATION, Bellingham, Wash.
INDUSTRIAL BUILDING AND LOAN ASSOCIATION, South Bellingham, Wash.
SAVINGS AND LOAN ASSOCIATION, Bellingham, Washington.
KITSAP COUNTY SAVINGS AND LOAN ASSOCIATION, Bremerton, Washington.
PENINSULAR SAVINGS AND LOAN ASSOCIATION, Bremerton, Washington.
WEST COAST SAVINGS AND LOAN ASSOCIATION, Centralia, Washington.
CASCADE SAVINGS AND LOAN ASSOCIATION, Everett, Washington.
COMMERCIAL SAVINGS AND LOAN ASSOCIATION, Everett, Washington.
SCANDINAVIAN AMERICAN SAVINGS AND LOAN ASSOCIATION, Everett, Wash.
SOUTHWEST WASHINGTON SAVINGS AND LOAN ASSOCIATION, Hoquiam,
Washington.
OLYMPIA BUILDING AND LOAN ASSOCIATION, Olympia, Washington.
PULLMAN SAVINGS AND LOAN ASSOCIATION, Pullman, Washington.
BALLARD SAVINGS AND LOAN ASSOCIATION, Seattle, Washington.
COSMOPOLITAN SAVINGS AND LOAN ASSOCIATION, Seattle, Washington.
GERMAN SAVINGS, BUILDING AND LOAN ASSOCIATION, Seattle, Washington.
THE HOME SAVINGS AND LOAN ASSOCIATION, Seattle, Washington.
MUTUAL SAVINGS AND LOAN ASSOCIATION, Seattle, Washington.
NORTHERN SAVINGS AND LOAN ASSOCIATION, Seattle, Washington.
PRUDENTIAL SAVINGS AND LOAN ASSOCIATION, Seattle, Washington.
PUGET SOUND SAVINGS AND LOAN ASSOCIATION, Seattle, Washington.
SEATTLE SAVINGS AND LOAN ASSOCIATION, Seattle, Washington.
TRADES UNION SAVINGS AND LOAN ASSOCIATION, Seattle, Washington.
UNIVERSAL SAVINGS AND LOAN ASSOCIATION, Seattle, Washington.
CITIZENS SAVINGS AND LOAN SOCIETY, Spokane, Washington.
FIDELITY SAVINGS AND LOAN ASSOCIATION, Spokane, Washington.
SPOKANE SAVINGS AND LOAN ASSOCIATION, Spokane, Washington.
MODERN SAVINGS AND LOAN ASSOCIATION, Tacoma, Washington.
NORTHWESTERN SAVINGS AND LOAN ASSOCIATION, Tacoma, Washington.
THE PACIFIC BUILDING AND LOAN ASSOCIATION, Tacoma, Washington.
THE PEOPLES SAVINGS AND LOAN ASSOCIATION, Tacoma, Washington.
STATE BUILDING AND LOAN ASSOCIATION, Tacoma, Washington.
TACOMA SAVINGS AND LOAN ASSOCIATION, Tacoma, Washington.
UNITED STATES SAVINGS AND LOAN ASSOCIATION, Tacoma, Washington.
WALLA WALLA SAVINGS AND LOAN ASSOCIATION, Walla Walla, Washington.
INTER-STATE BUILDING, LOAN AND TRUST ASSOCIATION, Walla Walla,
Washington.
THE LIBERTY SAVINGS AND LOAN ASSOCIATION, Yakima, Washington.
THE YAKIMA SAVINGS AND LOAN ASSOCIATION, Yakima, Washington.

FOREIGN ASSOCIATIONS.

EQUITABLE SAVINGS AND LOAN ASSOCIATION, Portland, Oregon.
WESTERN LOAN AND BUILDING COMPANY, Salt Lake, Utah.
PACIFIC STATES SAVINGS AND LOAN COMPANY, San Francisco, California.

ANNUAL STATEMENT AT CLOSE OF BUSINESS JUNE 30, 1919

ABERDEEN SAVINGS AND LOAN ASSOCIATION, OF ABERDEEN, WASHINGTON.

OFFICERS

J. E. FITZGERALD, President. W. O. McCAW, Secretary.
W. J. PATTERSON, Treasurer.

DIRECTORS

SAMUEL BENN, W. J. PATTERSON, EUGENE FRANCE, ALBERT MOON,
M. L. ELLING, J. E. FITZGERALD, B. H. RUPP, MRS. J. S. GUNN,
GEORGE SMITH, GABRIEL CARLSON.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	35
Number of shares sold during the year.....	97
Number of shares cancelled and withdrawn during the year.....	77
Number of shares in force at close of year.....	286
Amount of membership fee per share charged.....	\$1 00
Rate of annual dividend declared for year past.....	6%

RECEIPTS

Installments or dues on stock.....	\$5,774 55
Repayments on loans.....	6,399 75
Real estate sold.....	550 00
Interest	1,777 31
Rents from real estate.....	131 90
Membership fees collected, commission on loans.....	55 00
Overdraft, Hayes & Hayes Bank.....	869 02
Cash on hand July 1, 1918, and in bank.....	3,488 05

Total receipts and balances.....	\$19,045 53
----------------------------------	-------------

DISBURSEMENTS

Real estate loans (amount on ledger \$9,101.00, less \$33.07 of Jennie Williams loan not yet absorbed).....	\$9,067 93
Insurance and taxes advanced.....	44 13
Withdrawals of stock.....	7,700 00
Dividends	1,473 00
Salary of officers and directors.....	270 00
Office help, rent, etc.....	187 20
Commission on loans.....	106 00
Cash on hand June 30, 1919.....	197 32

Total disbursements and cash balance.....	\$19,045 53
---	-------------

ASSETS

Cash on hand.....	\$197 32
Real estate loans.....	25,435 21
Real estate owned.....	348 83
Real estate sold under contract.....	2,960 00
Furniture and fixtures.....	37 97
J. S. Creech (due on insurance).....	9 00

Total assets	\$28,988 33
Interest due and uncollected.....	92 14

LIABILITIES

Stock, paid-up	\$23,800 00
Installment stock	2,417 25
Contingent fund	1,050 92
Undivided profits	694 07
Hayes & Hayes Bank, overdraft.....	869 02
Commission on loans.....	124 00
Jennie M. Williams, due McCaw & Co. for insurance.....	33 07
Total liabilities	\$28,988 33
Interest due and uncollected.....	92 14

**SECURITY SAVINGS AND LOAN SOCIETY, OF ABERDEEN,
WASHINGTON.**

OFFICERS

J. B. BENSON, President. FRANK G. JONES, Secretary.
F. W. LOOMIS, Attorney.

DIRECTORS

J. B. BENSON, ELMER E. HEMRICK, H. W. HANSEN, JOHN PINCKNEY,
CHARLES W. HUOTOSI, JOHN A. DAMITIO, H. M. DELANTY,
J. J. ROBINSON, FRANK G. JONES.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	32
Number of shares sold during the year.....	175
Number of shares cancelled and withdrawn during the year.....	None
Number of shares in force at close of year.....	372
Amount of membership fee per share charged.....	\$2 00
Rate of annual dividend declared for year past.....	8%

RECEIPTS

Installments or dues on stock.....	\$3,681 65
Repayments on loans.....	1,563 12
Interest	297 33
Membership fees collected.....	340 00
Cash on hand July 1, 1918.....	160 77
Total receipts and balances.....	\$6,042 87

DISBURSEMENTS

Real estate loans.....	\$2,700 00
Stock	28 00
Dividends	196 22
Office help, rent, etc.....	43 65
Commission on stock (membership fees).....	212 50
Cash on hand June 30, 1919.....	2,862 50
Total disbursements and cash balance.....	\$6,042 87

ASSETS

Cash on hand.....	\$2,862 50
Real estate loans.....	4,950 00
Stock loans	28 00
Interest account overdrawn.....	23 28
Total assets	\$7,863 78

LIABILITIES	
Stock	\$6,768 46
Paid on loans.....	1,030 36
Total expense account.....	64 96
Total liabilities	\$7,863 78

**SKAGIT COUNTY SAVINGS AND LOAN ASSOCIATION, OF ANACORTES,
WASHINGTON.**

OFFICERS

JOHN A. BABCOCK, President.

W. H. McCALLUM, Secretary.

FRED D. CARTWRIGHT, Treasurer.

BEN DRIFTMIER, Attorney.

DIRECTORS

JOHN A. BABCOCK, LEWIS A. HOWELL, W. H. McCALLUM, J. F. LYONS,
FRED D. CARTWRIGHT, BEN DRIFTMIER, A. B. COOK.

Amount of authorized capital.....	\$1,000,000 00
Par value	\$100 00
Number of members.....	74
Number of shares sold during the year.....	61
Number of shares cancelled and withdrawn during the year.....	1
Number of shares in force at close of year.....	665
Amount of membership fee per share charged.....	\$2 00
Rate of annual dividend declared for year past.....	8%

RECEIPTS

Installments or dues on stock.....	\$5,808 08
Repayments on loans.....	1,396 94
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	750 00
Interest	809 86
Membership fees collected.....	68 00
Repayments on stock loans.....	31 70
Cash on hand July 1, 1918.....	173 02
Total receipts and balances.....	\$9,037 60

DISBURSEMENTS

Real estate loans.....	\$5,000 00
Insurance and taxes advanced.....	42 50
Withdrawals of stock.....	3,144 83
Dividends	596 54
Commission on stock (membership fees).....	62 00
Cash on hand June 30, 1919.....	191 73
Total disbursements and cash balance.....	\$9,037 60

ASSETS

Cash on hand.....	\$191 73
Real estate loans.....	10,291 42
Stock loans	633 82
Advances on account of loans.....	42 50
Total assets	\$11,159 47

LIABILITIES

Stock	\$9,901 74
Contingent fund	87 90
Undivided profits	101 02
Expense	6 00
Bills payable	750 00
Discount and interest.....	4 81
Dividends due and unpaid.....	308 00
Total liabilities	\$11,159 47

**NEW WHATCOM BUILDING AND LOAN ASSOCIATION, OF
BELLINGHAM, WASHINGTON.**

OFFICERS

GEO. E. GAGE, President.	THOS. B. COLE, Secretary.
C. K. McMILLAN, Treasurer.	J. A. KELLOGG, Attorney.

DIRECTORS

GEO. E. GAGE, J. C. MINTON, J. L. EASTON, C. R. GRAHAM, GEO. DODSON, W. J. GRISWOLD, J. A. KELLOGG, C. ERHOLM, THOS. B. COLE.
--

Amount of authorized capital.....	\$1,000,000 00
Par value	\$100 00
Number of members.....	54
Number of shares sold during the year.....	80
Number of shares cancelled and withdrawn during the year.....	172
Number of shares in force at close of year.....	836
Amount of membership fee per share charged.....	None
Rate of annual dividend declared for year past.....	7½%

RECEIPTS

Installments or dues on stock.....	\$4,216 00
Repayments on loans.....	13,423 73
Insurance, taxes and other advances refunded.....	48 00
Interest	3,230 28
Rents from real estate.....	147 00
Delinquent dues paid.....	1,192 00
Delinquent interest paid.....	486 54
Items paid in advance.....	199 00
Cash on hand July 1, 1918.....	6,977 80
Total receipts and balances.....	\$29,920 35

DISBURSEMENTS

Real estate loans.....	\$8,365 31
Insurance and taxes advanced.....	16 00
Withdrawals of stock.....	8,435 00
Dividends	6,363 15
Salary of officers and directors.....	840 00
Office help, rent, etc.....	74 75
Legal services	6 15
Taxes	125 00
Cash on hand June 30, 1919.....	5,694 99
Total disbursements and cash balance.....	\$29,920 35

ASSETS

Cash on hand.....	\$5,694 99
Real estate loans.....	37,061 06
Real estate owned.....	2,755 65
Advances on account of loans.....	215 10
Furniture and fixtures.....	150 00
Delinquent dues.....	481 50
Accrued interest.....	295 37
Total assets.....	\$46,653 67
Interest due and uncollected.....	295 37

LIABILITIES

Stock—Class "A".....	\$13,280 00
Stock—Class "B".....	500 00
Stock—Class "C".....	19,600 00
Dividends.....	10,320 76
Contingent fund.....	2,594 16
Undivided profits.....	151 36
Loans due and incomplete.....	134 69
Rent account.....	55 20
Items paid in advance.....	17 50
Total liabilities.....	\$46,653 67
Interest due and uncollected.....	295 37

INDUSTRIAL BUILDING AND LOAN ASSOCIATION, OF SOUTH BELLINGHAM, WASHINGTON.

OFFICERS

CYRUS GATES, President.
I. J. ADAIR, Treasurer.

F. D. YALE, Secretary.
F. D. YALE, Attorney.

DIRECTORS

CYRUS GATES, C. T. LATHROP, THOMAS MURRAY, MICHAEL RAE,
M. H. GATES, A. L. STENRIG, A. W. DEMING, J. L. EASTON,
SARAH C. DILLON.

Amount of authorized capital.....	\$2,000,000 00
Par value.....	\$100 00
Number of members.....	29
Number of shares sold during the year.....	None
Number of shares cancelled and withdrawn during the year.....	113
Number of shares in force at close of year.....	268
Amount of membership fee per share charged—serial, 25c; paid-up..	\$1 00
Rate of annual dividend declared for year past.....	8%

RECEIPTS

Installments or dues on stock.....	\$515 50
Repayments on loans.....	3,718 95
Real estate sold.....	50 00
Interest.....	1,822 75
Rents from real estate.....	30 00
Cash on hand July 1, 1918.....	32 21
Total receipts and balances.....	\$6,169 41

DISBURSEMENTS

Withdrawals of stock.....	\$1,806 00
Dividends	1,330 95
Salary of officers and directors.....	300 00
Office help, rent, etc.....	37 30
Real estate taxes paid.....	72 19
Cash on hand June 30, 1919.....	2,622 97
Total disbursements and cash balance.....	\$6,169 41

ASSETS

Cash on hand.....	\$2,622 97
Real estate loans.....	12,127 55
Real estate owned.....	950 00
Total assets	\$15,700 52
Interest due and uncollected.....	650 00

LIABILITIES

Stock—Serial	\$3,036 95
Stock—Paid-up	7,750 00
Contingent fund	369 70
Undivided profits	544 72
Dividend fund	3,999 15
Total liabilities	\$15,700 52
Interest due and uncollected.....	650 00

SAVINGS AND LOAN ASSOCIATION, OF BELLINGHAM, WASHINGTON.**OFFICERS**

JOHN McCUSH, President.	ROLAND G. GAMWELL, Secretary.
F. F. HANDSCHY, Treasurer.	VIRGIL PERINGER, Attorney.

DIRECTORS

JOHN McCUSH, ROLAND G. GAMWELL, J. B. BENNETT, A. W. BOWMAN, F. F. HANDSCHY, VIRGIL PERINGER.
--

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	445
Number of shares sold during the year.....	20
Number of shares cancelled and withdrawn during the year.....	None
Number of shares in force at close of year.....	4,199
Amount of membership fee per share charged.....	\$1 00
Rate of annual dividend declared for year past.....	6%

RECEIPTS

Installments or dues on stock.....	\$3,020 40
Repayments on loans.....	5,342 78
Interest	1,018 03
Repayments on tax certificates.....	9 96
Cash on hand July 1, 1918 (in Bellingham National).....	1,012 89
Total receipts and balances.....	\$10,404 06

DISBURSEMENTS

Real estate loans.....	\$6,033 62
Withdrawals of stock.....	1,960 55
Dividends	682 95
Office help, rent, etc.....	302 85
Bonds, warrants, certificates.....	782 40
Interest accrued on same.....	4 03
State license	10 00
Cash on hand June 30, 1919 (in Bellingham National).....	627 66

Total disbursements and cash balance.....	\$10,404 06
---	-------------

ASSETS

Cash on hand.....	\$627 66
Real estate loans.....	13,547 34
Bonds and warrants.....	3,524 26
Furniture and fixtures.....	2 00

Total assets	\$17,701 26
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LIABILITIES

Stock	\$17,184 70
Contingent fund	214 31
Undivided profits	302 25

Total liabilities	\$17,701 26
-------------------------	-------------

**KITSAP COUNTY SAVINGS AND LOAN ASSOCIATION, OF BREMERTON,
WASHINGTON.**

OFFICERS

EDWARD J. TAGGART, President. THOMAS STEVENSON, Secretary.
THOMAS STEVENSON, Treasurer. THOMAS STEVENSON, Attorney.

DIRECTORS

EDWARD J. TAGGART, THOMAS STEVENSON, A. G. BENBENNICK,
ROBERT STEWART, JOSEPH MERCHANT, FRED BENEDICT,
FRANK J. LEAHY, CARL DREW, R. B. LILLY.

Amount of authorized capital.....	\$250,000 00
Par value	\$100 00
Number of members.....	9
Number of shares sold during the year.....	None
Amount of membership fee per share charged.....	None
Rate of annual dividend declared for year past.....	6%

RECEIPTS

Installments or dues on stock.....	\$60 00
Repayments on loans.....	4,138 04
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	3,575 00
Interest	911 99
Cash on hand July 1, 1918.....	2,736 05

Total receipts and balances.....	\$11,421 08
----------------------------------	-------------

DISBURSEMENTS

Borrowed money paid.....	\$2,575 00
Interest on borrowed money.....	111 63
Withdrawals of stock.....	8,100 83
Dividends	186 15
Salary of officers and directors.....	200 00
Office help, rent, etc.....	152 08
Cash on hand June 30, 1919.....	95 34

Total disbursements and cash balance.....	\$11,421 08
---	-------------

ASSETS

Cash on hand.....	\$95 34
Real estate loans.....	6,830 37

Total assets	\$6,925 71
--------------------	------------

LIABILITIES

Stock	\$5,201 55
Note at bank.....	1,000 00
Contingent fund	308 10
Undivided profits	416 06

Total liabilities	\$6,925 71
-------------------------	------------

**PENINSULAR SAVINGS AND LOAN ASSOCIATION, OF BREMERTON,
WASHINGTON.**
OFFICERS

PAUL MEHNER, President.

CLAIR A. FULMER, Secretary.

C. S. ROBERTSON, Treasurer.

MARION GARLAND, Attorney.

DIRECTORS

PAUL MEHNER, CLAIR A. FULMER, C. S. ROBERTSON, L. A. BENDER,

GEO. M. TERRELL.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	39
Number of shares sold during the year.....	17
Number of shares cancelled and withdrawn during the year.....	4
Number of shares in force at close of year.....	295.72
Amount of membership fee per share charged.....	\$1 00
Rate of annual dividend declared for year past.....	8%

RECEIPTS

Installments or dues on stock.....	\$3,004 53
Repayments on loans.....	2,228 34
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	1,810 00
Interest	389 71
Membership fees collected.....	17 00
Loan expenses and fees.....	176 65
Cash on hand July 1, 1918.....	138 78

Total receipts and balances.....	\$7,765 01
----------------------------------	------------

DISBURSEMENTS

Real estate loans.....	\$5,683 18
Stock	500 00
Borrowed money paid.....	1,160 00
Interest on borrowed money.....	35 91
Withdrawals of stock.....	117 76
Office help, rent, etc.....	78 82
Loan expenses	118 65
Cash on hand June 30, 1919.....	70 69

Total disbursements and cash balance..... \$7,765 01

ASSETS

Cash on hand.....	\$70 69
Real estate loans.....	11,553 15
Stock loans	3,264 45
Advances on account of loans.....	9 32

Total assets \$14,897 61

LIABILITIES

Stock	\$8,586 71
Contingent fund	17 16
Undivided profits	286 31
Loans due and incomplete.....	5,000 00
Borrowed money	1,000 00
Expense fund	7 43

Total liabilities \$14,897 61

**WEST COAST SAVINGS AND LOAN ASSOCIATION, OF CENTRALIA,
WASHINGTON.**

OFFICERS

T. H. McCLEARY, President.

ALBERT SMITH, Treasurer.

GEO. L. BARNER, Secretary.

J. R. BUXTON, Attorney.

DIRECTORS

J. C. WATSON, W. F. KELLING, THOS. G. RUNYAN, J. E. FITZGERALD,

J. S. SAUNDERS, DAVID LIVINGSTONE, F. H. COLE,

O. H. BRASIER.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	20
Number of shares sold during the year.....	None
Number of shares cancelled and withdrawn during the year.....	10
Number of shares in force at close of year.....	225
Amount of membership fee per share charged.....	\$2 00
Rate of annual dividend declared for year past.....	8%

RECEIPTS

Installments or dues on stock.....	\$725 00
Repayments on loans.....	334 05
Interest	219 47
Cash on hand July 1, 1919.....	216 36

Total receipts and balances..... \$1,494 88

DISBURSEMENTS

Real estate loans.....	\$300 00
Withdrawals of stock.....	861 45
Dividends	12 07
Cash on hand June 30, 1919.....	216 36
Total disbursements and cash balance.....	\$1,389 88

ASSETS

Cash on hand.....	\$216 36
Real estate loans.....	2,083 68
Total assets	\$2,300 04

LIABILITIES

Stock	\$2,329 18
Contingent fund	22 63
Total liabilities	\$2,351 81

**CASCADE SAVINGS AND LOAN ASSOCIATION, OF EVERETT,
WASHINGTON.**

OFFICERS

C. W. MILEY, President.
W. R. BOOTH, Treasurer.

W. P. BELL, Secretary.
W. P. BELL, Attorney.

DIRECTORS

C. W. MILEY, H. O. SILER, W. P. BELL, W. R. BOOTH, A. E. McKEE,
S. J. PRITCHARD, G. W. MUMAW, H. T. FOWLER,
L. D. CARPENTER.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	184
Number of shares sold during the year.....	76
Number of shares cancelled and withdrawn during the year.....	176
Number of shares in force at close of year.....	2,263
Amount of membership fee per share charged.....	\$2 00
Rate of annual dividend declared for year past.....	6%

RECEIPTS

Installments or dues on stock.....	\$7,882 36
Repayments on loans.....	5,851 91
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	3,150 00
Insurance, taxes and other advances refunded.....	211 86
Interest	1,965 34
Membership fees collected.....	172 00
Repayments on stock loans.....	50 00
Payments on Liberty Bond contracts.....	260 00
Payments on Liberty Bond loans.....	225 00
Cash suspense received.....	83 00
Cash on hand July 1, 1918.....	750 81
Total receipts and balances.....	\$20,602 28

DISBURSEMENTS

Real estate loans.....	\$7,533 92
Stock loans	50 00
Borrowed money paid.....	1,500 00
Interest on borrowed money.....	5 00
Withdrawals of stock.....	6,737 31
Dividends paid in cash.....	209 60
Office help, rent, etc.....	334 70
Commission on stock (membership fees).....	172 00
Liberty Bonds	400 00
Advance on real estate loans (covered by mortgage).....	63 00
Liberty Bond loans.....	45 00
Suspense refunds	38 00
Cash on hand June 30, 1919.....	3,513 75
Total disbursements and cash balance.....	\$20,602 28

ASSETS

Cash on hand.....	\$3,513 75
Real estate loans.....	24,101 97
Bonds and warrants (Liberty Bonds).....	700 00
Advances on account of loans.....	341 83
Furniture and fixtures.....	172 03
Expense advanced	334 70
Total assets	\$29,164 26
Interest due and uncollected.....	78 67

LIABILITIES

Stock	\$23,321 26
Contingent fund	120 00
Undivided profits	1,129 91
Loans due and incomplete.....	2,128 11
Borrowed money	2,450 00
Liberty Bond account.....	15 00
Total liabilities	\$29,164 28
Interest due and uncollected.....	78 67

**COMMERCIAL SAVINGS AND LOAN ASSOCIATION, OF EVERETT,
WASHINGTON.**

OFFICERS

JOHN L. BOYLE, President.
MAE B. PREY, Treasurer.

O. W. F. THOMKE, Secretary.
WILLIAM A. JOHNSON, Attorney.

DIRECTORS

JOHN L. BOYLE, J. A. MYERS, W. H. HORTON, W. H. CLAY, MAE B. PREY,
O. W. F. THOMKE.

Amount of authorized capital.....	\$1,000,000 00
Par value	\$100 00
Number of members.....	21
Number of shares sold during the year.....	None
Number of shares cancelled and withdrawn during the year.....	None
Number of shares in force at close of year.....	329
Amount of membership fee per share charged.....	\$2 00
Rate of annual dividend declared for year past.....	None

RECEIPTS

Installments or dues on stock.....	\$172 50
Repayments on loans.....	53 57
Interest	23 25
Cash on hand July 1, 1918.....	95 46
Total receipts and balances.....	\$344 78

DISBURSEMENTS

Office help, rent, etc.....	\$107 50
State inspector	6 00
License	10 00
Bond premium	4 00
Cash on hand June 30, 1919.....	217 28
Total disbursements and cash balance.....	\$344 78

ASSETS

Cash on hand.....	\$217 28
Real estate loans.....	226 37
Furniture and fixtures.....	140 15
Total assets	\$583 80

LIABILITIES

Stock	\$560 55
Interest	23 25
Total liabilities	\$583 80

**SCANDINAVIAN AMERICAN SAVINGS AND LOAN ASSOCIATION, OF
EVERETT, WASHINGTON.**

OFFICERS

S. O. WALLGREN, President.	JOHN NORMAN, Secretary.
P. M. GAVELSTAD, Treasurer.	ANDREW JOHNSON, Attorney.

DIRECTORS

S. O. WALLGREN, JOHN NORMAN, P. M. GAVELSTAD, ANDREW JOHNSON, E. C. LUND, JOHN RAMSTAD, M. H. CLAUSEN, N. KASPERSEN, ROBT. ANDERSEN, K. K. AALBU, L. F. THEURER.
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Amount of authorized capital.....	\$2,500,000 00
Par value	\$100 00
Number of members.....	51
Number of shares sold during the year.....	11
Number of shares cancelled and withdrawn during the year.....	95
Number of shares in force at close of year.....	455
Amount of membership fee per share charged.....	\$2 00
Rate of annual dividend declared for year past.....	8%

RECEIPTS

Installments or dues on stock.....	\$1,495 00
Repayments on loans.....	1,654 06
Membership fees collected.....	22 00
Cash on hand July 1, 1918.....	1,165 47
Total receipts and balances.....	\$4,336 53

DISBURSEMENTS

Real estate loans.....	\$1,550 00
Withdrawals of stock.....	840 00
Dividends	129 47
Office help, rent, etc. (no expenses this year).....	11 10
Commission on stock (membership fees).....	22 00
State fee	10 00
State report	2 00
Cash on hand June 30, 1919.....	1,771 96

Total disbursements and cash balance..... \$4,386 53

ASSETS

Cash on hand.....	\$1,771 96
Real estate loans.....	3,678 69

Total assets \$5,450 65

LIABILITIES

Stock	\$5,148 67
Undivided profits	301 98

Total liabilities \$5,450 65

SOUTHWEST WASHINGTON SAVINGS AND LOAN ASSOCIATION, OF HOQUIAM, WASHINGTON.

OFFICERS

FRANK H. LAMB, President.
P. J. MOURANT, Treasurer.

E. B. ARTHAUD, Secretary.
L. H. BREWER, Attorney.

DIRECTORS

FRANK H. LAMB, P. J. MOURANT, E. B. ARTHAUD, F. F. FOSTER,
C. H. WISE, J. F. MACDONALD, OLAF RONKAINEN,
DANIEL SJOLSETH.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	171
Number of shares sold during the year.....	11
Number of shares cancelled and withdrawn during the year.....	206
Number of shares in force at close of year.....	581
Amount of membership fee per share charged.....	\$1 00
Rate of annual dividend declared for year past.....	8%

RECEIPTS

Installments or dues on stock.....	\$5,204 48
Repayments on loans.....	3,760 21
Interest	1,282 10
Membership fees collected.....	22 00
Cash on hand July 1, 1918.....	2,115 88

Total receipts and balances..... \$12,384 67

DISBURSEMENTS

Real estate loans.....	\$7,875 00
Withdrawals of stock.....	1,833 02
Dividends	371 76
Office help, rent, etc.....	29 25
Cash on hand June 30, 1919.....	2,275 64

Total disbursements and cash balance..... \$12,384 67

ASSETS

Cash on hand.....	\$2,275 64
Real estate loans.....	15,965 04
Stock loans	20 55
Bonds and warrants (Liberty Bonds).....	500 00

Total assets \$18,761 23

LIABILITIES

Stock	\$17,388 19
Contingent fund	75 91
Undivided profits	1,285 60
Membership fee account.....	11 53

Total liabilities \$18,761 23

**OLYMPIA BUILDING AND LOAN ASSOCIATION, OF OLYMPIA,
WASHINGTON.**

OFFICERS

C. H. SPRINGER, President. FRED W. STOCKING, Secretary.
GERTRUDE E. LEACH, Treasurer. P. M. TROY, Attorney.

DIRECTORS

C. H. SPRINGER, MILLARD LEMON, J. F. KEARNEY, FRED W. STOCKING,
CHAS. E. HEWITT, G. C. WINSTANLEY, P. M. TROY.

Amount of authorized capital (20,000 shares).....	\$2,000,000 00
Par value	\$100 00
Number of members.....	1,000
Number of shares sold during the year.....	4,856.65
Number of shares cancelled and withdrawn during the year.....	2,182.25
Number of shares in force at close of year.....	16,180.15
Amount of membership fee per share charged.....	\$1 00
Rate of annual dividend declared for year past.....	6%

RECEIPTS

Installments or dues on stock.....	\$297,911 21
Repayments on loans.....	132,158 24
Repayments on stock loans.....	5,266 57
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	2,000 00
Insurance, taxes and other advances refunded.....	2,318 49
Interest	41,589 63
Membership fees collected.....	2,703 25
Appraisal fees	331 50
Attorney fees	685 50

County warrants	630 65
War Savings Stamps.....	500 00
Loan balance	2,742 65
Miscellaneous items refunded Association.....	23 79
Agents' fees (membership fees) refunded, account loans cancelled...	26 00
Cash on hand July 1, 1918.....	1,203 83

Total receipts and balances..... \$490,091 31

DISBURSEMENTS

Real estate loans.....	\$200,473 75
Stock	9,669 00
Borrowed money paid.....	4,000 00
Interest on borrowed money.....	4 66
Insurance and taxes advanced.....	3,114 02
Withdrawals of stock.....	188,601 82
Dividends	33,619 50
Salary of officers and directors.....	5,171 65
Office help, rent, etc.....	3,880 53
Legal services (examination of abstracts).....	685 50
Commission on loans.....	509 50
Commission on stock (membership fees).....	15 50
Liberty Bonds, \$13,400.00; War Savings Stamps, \$500.00; total.....	13,900 00
County warrants	424 20
Furniture and fixtures, addressograph machine and plates.....	247 62
Refunds of excess payments on loans (profit and loss).....	266 51
Loan balances	24,689 91
Appraisal fee returned (loan cancelled).....	10 00
Membership fee returned (loan cancelled).....	26 00
Cash on hand June 30, 1919.....	781 59

Total disbursements and cash balance..... \$490,091 31

ASSETS

Cash on hand.....	\$781 59
Real estate loans.....	604,564 85
Stock loans	5,971 61
Bonds and warrants (Liberty Bonds, \$34,650.00; county warrants, \$300.00)	34,950 00
Advances on account of loans.....	1,090 75
Furniture and fixtures (\$1,047.62, less depreciation \$147.62).....	900 00

Total assets

Interest due and uncollected..... 1,142 99

LIABILITIES

Stock	\$635,646 90
Contingent fund	7,200 00
Undivided profits (reserve fund).....	825 49
Loans due and incomplete.....	4,585 91

Total liabilities

Interest due and uncollected..... 1,142 99

PULLMAN SAVINGS AND LOAN ASSOCIATION, PULLMAN, WASHINGTON.

OFFICERS

J. N. EMERSON, President.

M. K. SNYDER, Secretary.

J. F. GERDING, Treasurer.

D. C. DOW, Attorney.

DIRECTORS

D. F. STALEY, WM. SWAIN, J. N. EMERSON, F. M. SLAGLE, J. F. GERDING,
W. C. KRUEGAL, A. A. CLEVELAND.

Amount of authorized capital.....	\$400,000 00
Par value	100 00
Number of members.....	246
Number of shares sold during the year (A, 507½; D, 418).....	925½
Number of shares cancelled and withdrawn during the year (A, 606; D, 164)	770
Number of shares in force at close of year (A, 2,679; D, 1,146.85)....	3,825.85
Amount of membership fee per share charged.....	25c
Rate of annual dividend declared for year past.....	9%

RECEIPTS

Installments or dues on stock.....	\$22,956 66
Repayments on loans (real estate, \$26,457.86; stock, \$6,071.83).....	32,529 69
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	12,030 00
Insurance, taxes and other advances refunded.....	514 83
Interest	16,584 52
Rents from real estate.....	576 10
Membership fees collected.....	126 88
Fines	654 43
Fully paid stock.....	41,800 00
Suspense items	3,208 61
Loan fees	72 73
Miscellaneous	06
Cash on hand July 1, 1918.....	1,158 72
Total receipts and balances.....	\$132,213 23

DISBURSEMENTS

Real estate loans.....	\$20,600 00
Stock loans	3,486 27
Borrowed money paid.....	21,630 00
Interest on borrowed money.....	848 85
Insurance and taxes advanced.....	798 91
Withdrawals of stock (maturity A, \$22,360.19; withdrawal D, \$16,400.00; withdrawal A, \$15,667.17).....	54,427 36
Dividends, cash	5,468 31
Salary of officers and directors.....	600 00
Office help, rent, etc. (rent, \$120.00; general expense, \$165.42).....	285 42
Loan fees	93 73
Suspense	3,208 61
Disbursements on real estate.....	304 91
Bonds of officers.....	40 00
State license, \$30.00; state examiner and stenographer, \$44.50; total..	74 50
Cash on hand June 30, 1919.....	20,346 86
Total disbursements and cash balance.....	\$132,213 23

ASSETS	
Cash on hand.....	\$2,731 90
Real estate loans.....	12,949 63
Stock loans	1,688 37
Advances on account of loans.....	23 68
Furniture and fixtures.....	43 00
Foreclosure costs	34 00
Liberty Bond payment.....	5 00
Total assets	\$17,475 58
Interest due and uncollected.....	12 00

LIABILITIES	
Stock	\$17,313 34
Contingent fund	75 60
Undivided profits	19 51
Loans due and incomplete.....	3 20
Loan expense	63 93
Total liabilities	\$17,475 58
Interest due and uncollected.....	12 00

**GERMAN SAVINGS, BUILDING AND LOAN ASSOCIATION, OF SEATTLE,
WASHINGTON.**

OFFICERS

CHARLES OSNER, President.

AUGUST MEHLHORN, JR., Secretary.

DIRECTORS

CHARLES OSNER, AUGUST MEHLHORN, JR.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	9
Number of shares sold during the year.....	None
Number of shares cancelled and withdrawn during the year.....	None
Number of shares in force at close of year.....	None
Amount of membership fee per share charged.....	None
Rate of annual dividend declared for year past.....	7½%

RECEIPTS	
Installments or dues on stock.....	\$6,198 76
Rents from real estate.....	2,901 30
Cash overdraft July 1, 1918.....	5,868 44
Total receipts and balances.....	\$14,968 50

DISBURSEMENTS	
Withdrawals of stock.....	\$5,018 55
Dividends	4,210 72
Office help, rent, etc.....	32 50
Advanced for care of real estate, taxes, assessments, insurance, etc...	1,357 76
Cash overdraft June 30, 1919.....	4,348 97
Total disbursements and cash balance.....	\$14,968 50

Stock loans	\$37,073	55
Real estate owned.....	25,869	92
Furniture and fixtures.....	97	00
Tax certificate	116	12
Total assets	\$63,156	59

Stock	\$57,207 84
Undivided profits	80 31
Cash overdraft	5,868 44
Total liabilities	\$63,156 59

W. V. EDDY, President. A. E. PIERCE, Secretary.
ROBERT GRASS, Attorney.

W. V. EDDY, C. C. PIERCE, C. C. PHILLIPS, L. F. JONES, A. E. PIERCE,
WM. G. OYLER, DR. C. E. GUTHRIE.

Installments or dues on stock.....	\$192,445 80
Repayments on loans (real estate mortgages).....	60,142 97
Borrowed money under Sec. 8, Ch. 110, Laws 1913 (bonds).....	7,600 00
Insurance, taxes and other advances refunded.....	962 54
Interest and other earnings.....	18,627 53
Membership fees collected.....	124 88
Office rent refunded.....	1,000 00
Repayments on stock loans.....	3,681 50
Repayments on real estate sold on contract.....	2,694 91
Repayments on loans on Liberty Bond security.....	13,576 30
Liberty Bonds sold.....	71,570 79
Security for appeal bond returned (appeal successful).....	750 00
Real estate expense refunded.....	33 50
Repayments on loans made to members for purchase of Victory Bonds	510 00
Refund of overpayment of dividend.....	58 54
Cash on hand July 1, 1918.....	18,444 40
Total receipts and balances.....	\$392,223 66

DISBURSEMENTS

Real estate loans.....	\$160,929 45
Stock	4,795 00
Interest on borrowed money.....	140 00
Insurance and taxes advanced and other advances on loans.....	4,636 84
Withdrawals of stock.....	101,949 53
Salary of officers and directors.....	525 00
Office help, rent, etc.....	3,318 50
Legal services	355 20
Commission on stock (membership fees).....	74 15
Furniture and fixtures.....	235 00
Real estate expense (taxes, insurance, repairs and interest).....	359 03
Liberty Bonds purchased.....	74,170 31
Liberty Bond loans.....	25,893 68
Victory Liberty Bond loans.....	2,765 00
War Savings Stamps purchased.....	846 00
Mortgage paid off.....	1,600 00
Commissions on sale of real estate.....	225 00
Examination expenses and annual license.....	88 75
Cash on hand June 30, 1919.....	9,317 32

Total disbursements and cash balance.....	\$392,223 66
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ASSETS

Cash on hand.....	\$9,317 32
Real estate loans.....	272,662 61
Stock loans	2,579 00
Real estate owned.....	236 63
Real estate sold under contract.....	17,170 09
Advances on account of loans.....	3,674 30
Furniture and fixtures.....	3,042 00
Office rent paid in advance.....	1,750 00
Liberty Bonds purchased.....	2,599 52
Liberty Bond loans.....	12,317 28
Victory Liberty Bond loans.....	2,255 00
War Savings Stamps.....	846 00

Total assets	\$328,449 75
Interest due and uncollected (approximately).....	3,000 00

LIABILITIES

Stock	\$284,298 24
Contingent fund	1,326 44
Undivided profits	39 05
Loans due and incomplete.....	26,774 09
Accrued interest on bonds.....	511 93
Bonds	15,500 00

Total liabilities	\$328,449 75
Interest due and uncollected (approximately).....	3,000 00

MUTUAL SAVINGS AND LOAN ASSOCIATION, OF SEATTLE, WASHINGTON.

OFFICERS

WILLIAM D. COMER, President. GEORGE R. HANNON, Secretary.
WILLIAM D. COMER, Treasurer.

DIRECTORS

THOMAS S. LIPPY, GEORGE R. HANNON, FRANK W. SHILLESTAD,
WORRALL WILSON, HENRY R. KING, FERGUSON JANSEN,
WILLIAM D. COMER.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	58
Number of shares sold during the year.....	70
Number of shares cancelled and withdrawn during the year.....	5
Number of shares in force at close of year.....	123
Amount of membership fee per share charged.....	None
Rate of annual dividend declared for year past.....	6%

RECEIPTS

Installments or dues on stock.....	\$28,801 32
Repayments on loans.....	8,401 33
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	2,500 00
Interest	1,300 07
Cash on hand July 1, 1918.....	1,318 06
Total receipts and balances.....	\$42,320 78

DISBURSEMENTS

Real estate loans.....	\$20,352 42
Borrowed money paid.....	2,500 00
Interest on borrowed money.....	71 82
Withdrawals of stock.....	13,057 84
Dividends	304 07
Office help, rent, etc.....	200 51
United States Government bonds.....	150 00
Cash on hand June 30, 1919.....	5,684 12
Total disbursements and cash balance.....	\$42,320 78

ASSETS

Cash on hand.....	\$5,684 12
Real estate loans.....	26,718 46
Bonds and warrants.....	150 00
Expense	21 94
Total assets	\$32,574 52
Interest due and uncollected.....	167 06

LIABILITIES

Stock	\$27,935 05
Contingent fund	121 05
Undivided profits	820 84
Loans due and incomplete.....	3,697 58
Total liabilities	\$32,574 52

**NORTHERN SAVINGS AND LOAN ASSOCIATION, OF SEATTLE,
WASHINGTON.**

OFFICERS

O. S. JONES, President. S. C. CALDERHEAD, Secretary.
S. C. CALDERHEAD, Acting Treasurer. ROBT. WELCH, Attorney.

DIRECTORS

O. S. JONES, T. H. PIDDUCK, S. C. CALDERHEAD, JAMES E. LAUSBURY,
A. McCAFFERTY, MARSHALL LEET, ISAAC J. TOMLINSON,
WM. P. ALLEN, C. B. CAMPBELL, G. A. PEARSON,
FRED H. PIKE.

Amount of authorized capital.....	\$12,000,000 00
Par value	\$100 00
Number of members.....	170
Number of shares in force at close of year.....	170
Amount of membership fee per share charged.....	\$2 00
Rate of annual dividend declared for year past.....	8%

RECEIPTS

Installments or dues on stock.....	\$13,118 27
Repayments on loans.....	5,450 20
Interest	1,390 78
Membership fees collected.....	273 50
Cash on hand July 1, 1918.....	714 01
Total receipts and balances.....	\$20,946 76

DISBURSEMENTS

Real estate loans.....	\$5,155 00
Withdrawals of stock.....	12,122 09
Dividends	1,097 00
Office help, rent, etc.....	224 25
Commission on stock (membership fees).....	273 50
Cash on hand June 30, 1919.....	2,074 92
Total disbursements and cash balance.....	\$20,946 76

ASSETS

Cash on hand.....	\$2,074 92
Real estate loans.....	13,272 07
Total assets	\$15,346 99

LIABILITIES

Stock	\$15,247 69
Contingent fund	99 30
Total liabilities	\$15,346 99

PRUDENTIAL SAVINGS AND LOAN ASSOCIATION, OF SEATTLE, WASHINGTON.

OFFICERS

G. E. TILTON, President.

PETER BETTINGER, Secretary.

G. E. STEINER, Attorney.

DIRECTORS

FRANK ATWOOD, PETER BETTINGER, M. E. BETTINGER, C. J. HUNT,
M. R. CUTTING, BYRON PHELPS, G. E. TILTON.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	789
Number of shares sold during the year.....	2,292
Number of shares cancelled and withdrawn during the year.....	987
Number of shares in force at close of year.....	4,970
Amount of membership fee per share charged.....	\$2 00
Rate of annual dividend declared for year past.....	7%

RECEIPTS

Installments or dues on stock.....	\$10,200 42
Repayments on loans.....	6,310 53
Interest	2,325 13
Membership fees collected.....	3,148 92
Suspense items	52 46
Cash on hand July 1, 1918.....	3,847 55
Total receipts and balances.....	\$25,885 01

DISBURSEMENTS

Real estate loans.....	\$9,857 94
Withdrawals of stock.....	11,409 30
Office help, rent, etc.....	143 00
Commission on stock (membership fees).....	3,148 92
To G. E. Tilton.....	1,168 44
Suspense	52 46
Cash on hand June 30, 1919.....	104 95
Total disbursements and cash balance.....	\$25,885 01

ASSETS

Cash on hand.....	\$104 95
Real estate loans.....	27,127 64
Advances on account of loans.....	34 05
Total assets	\$27,266 64

LIABILITIES

Stock	\$25,398 84
Contingent fund	214 52
Loans due and incomplete.....	17 54
Suspense	1,635 74
Total liabilities	\$27,266 64

DISBURSEMENTS

Real estate loans.....	\$140,443 00
Interest on Liberty Bond subscriptions.....	29 99
Insurance and taxes advanced and to complete buildings.....	1,367 41
Withdrawals of stock.....	45,203 97
Office help, rent, etc.....	4,562 40
For purchase of Liberty Bonds, and War Savings Stamps.....	6,987 50
Adding machine	235 00
Cash on hand June 30, 1919, and in the bank.....	11,760 81
Total disbursements and cash balance.....	\$210,590 08

ASSETS

Cash on hand.....	\$11,760 81
Real estate loans.....	176,048 17
Bonds and War Savings Stamps.....	4,107 40
Real estate owned.....	2,491 90
Advances on account of loans.....	999 54
Furniture and fixtures.....	2,235 00
Expense account	1,961 49
Liberty Bond subscribers	750 00
Total assets	\$200,354 31

LIABILITIES

Stock	\$175,356 71
Contingent fund	522 00
Undivided profits	6,679 12
Loans due and incomplete.....	6,808 74
Loans from bank.....	5,000 00
Special loss and gain account.....	5,987 74
Total liabilities	\$200,354 31

**TRADES UNION SAVINGS AND LOAN ASSOCIATION, OF SEATTLE,
WASHINGTON.**

OFFICERS

GEO. P. LISTMAN, President.

C. W. DOYLE, Secretary.

F. A. RUST, Secretary-Treasurer.

WM. G. McLAREN, Attorney.

DIRECTORS

R. L. PROCTOR, ALICE M. LORD, F. A. RUST, C. W. DOYLE, ED. T. LEVI,
ROBT. B. HESKETH, E. B. AULT, FRED N. NELSON, J. C. MUNDY,
GEO. P. LISTMAN, A. G. DENTLER.

Amount of authorized capital.....	\$2,000,000 00
Number of members.....	982
Number of shares sold during the year.....	2,042
Number of shares cancelled and withdrawn during the year.....	506
Number of shares in force at close of year.....	982
Amount of membership fee per share charged.....	None

RECEIPTS

Installments or dues on stock.....	\$204,216 52
Repayments on loans.....	842 26
Interest	437 28
Short loans (Liberty Bonds).....	2,510 00
Trades Union checks.....	2,070 00
Bond sales	83 92
Fifth, "Victory," Liberty Loan Bond subscriptions.....	13,097 62
Profit and loss account.....	65 52
Loan expense	569 27
Incomplete loans	22,629 30
Suspense items	4,415 47
Total receipts and balances.....	\$250,937 16

DISBURSEMENTS

Real estate loans.....	\$47,343 57
Interest	9 32
Withdrawals of stock.....	50,696 27
Office help, rent, etc.....	929 00
General expense	792 17
Trades Union checks.....	1,620 00
Bond investment	59,137 96
Short loans (Liberty Bonds).....	31,610 00
Incomplete loans	18,864 89
Office equipment	336 90
Profit and loss account.....	59 15
Fifth, "Victory," Liberty Loan Bonds.....	13,412 37
Bills payable	860 10
Loans expense	1,199 45
Suspense	4,644 48
Cash on hand June 30, 1919.....	19,421 53
Total disbursements and cash balance.....	\$250,937 16

ASSETS

Cash on hand.....	\$19,421 53
Real estate loans.....	46,485 50
Stock loans	29,100 00
Bonds and warrants.....	59,137 96
Furniture and fixtures.....	385 50
Fifth, "Victory," Bonds.....	485 00
Suspense account	2,158 38
Expense account	421 15
Total assets	\$157,595 02

LIABILITIES

Stock	\$153,520 25
Loans incomplete	3,624 77
Trades Union checks outstanding.....	450 00
Total liabilities	\$157,595 02

**UNIVERSAL SAVINGS AND LOAN ASSOCIATION, OF SEATTLE,
WASHINGTON.**

OFFICERS

W. S. BURT, President.

F. DANE LARKIN, Secretary.

B. L. McMULLEN, Treasurer.

D. V. HALVERSTADT, Attorney.

DIRECTORS

W. S. BURT, S. E. ANDERSON, B. L. McMULLEN, D. V. HALVERSTADT,
F. DANE LARKIN, H. B. ANDERSON, M. A. DALE.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	861
Number of shares sold during the year.....	2,257
Number of shares cancelled and withdrawn during the year.....	1,021
Number of shares in force at close of year.....	7,877
Amount of membership fee per share charged.....	None
Rate of annual dividend declared for year past.....	8%

RECEIPTS

Installments or dues on stock.....	\$281,249 72
Repayments on loans.....	35,834 28
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	2,000 00
Real estate sold.....	712 03
Interest	10,161 55
Contingent fund	324 07
Undivided profits	585 12
Suspense account	2,818 31
Balance due expense account.....	91 60
Total receipts and balances.....	\$333,776 68

DISBURSEMENTS

Real estate loans.....	\$196,714 58
Stock	457 73
Insurance and taxes advanced.....	203 76
Withdrawals of stock.....	95,245 01
Dividends	4,044 75
Legal services	220 40
Real estate contracts sold.....	8,400 00
Furniture and fixtures.....	1,293 75
Liberty Bonds	2,301 17
Loans on bonds.....	2,507 00
Incomplete loans	8,863 34
Cash on hand June 30, 1919.....	13,525 19
Total disbursements and cash balance.....	\$333,776 68

ASSETS

Cash on hand.....	\$13,525 19
Real estate loans.....	178,606 98
Stock loans	457 73
Real estate sold under contract.....	7,687 97
Advances on account of loans.....	424 16
Furniture and fixtures.....	1,293 75
Liberty Bonds	2,301 17
Loans on bonds.....	2,507 00
Accrued interest not delinquent.....	817 25
Total assets	\$207,621 20

LIABILITIES

Stock	\$186,004 71
Contingent fund	546 55
Undivided profits	7,296 69
Loans from other societies.....	2,000 00
Incomplete loans	8,863 34
Balance due expense account.....	91 60
Suspense account	2,818 31
Total liabilities	\$207,621 20

CITIZENS SAVINGS AND LOAN SOCIETY, OF SPOKANE, WASHINGTON.**OFFICERS**

EDWARD O'SHEA, President.	R. E. PORTERFIELD, Secretary.
J. ELMER WEST, Treasurer.	R. E. PORTERFIELD, Attorney.

DIRECTORS

EDWARD O'SHEA, JULIUS A. ZITTEL, J. ELMER WEST, J. J. KING,
THADDEUS S. LANE, DR. E. T. RICHTER, R. E. PORTERFIELD.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members (estimated).....	1,700
Number of shares sold during the year (estimated).....	1,500
Number of shares cancelled and withdrawn during the year.....	None
Number of shares in force at close of year.....	13,232
Amount of membership fee per share charged.....	\$1 00
Rate of annual dividend declared for year past.....	5%

RECEIPTS

Installments or dues on stock.....	\$208,756 53
Repayments on loans.....	50,373 31
Real estate sold.....	28,577 47
Insurance, taxes and other advances refunded (tax, \$1,242.95; other advances, \$6,260.88)	7,503 83
Interest	33,424 93
Rents from real estate.....	7,594 86
Examining fees	45 00
Stock loans repaid.....	4,571 05
Set aside to contingent fund.....	1,480 00
Real estate contracts.....	15,318 88
Payments on Liberty Bonds financed.....	27,694 65
Bonds	20,050 00
Uncompleted loans	10,000 00
Warrants	3,401 97
Dividends paid to members.....	28,672 35
Contingent fund	120 86
Cash on hand July 1, 1918.....	35,563 59

Total receipts and balances..... \$483,149 59

DISBURSEMENTS

Real estate loans.....	\$67,250 00
Stock loans	5,116 50
Insurance and taxes advanced—	
Taxes	1,165 26
Other	4,635 14
Withdrawals of stock.....	193,725 11
Dividends	28,672 35
Salary of officers and directors.....	2,959 52
Office help, rent, etc.....	3,841 64
Repairs and carrying charges on real estate.....	4,070 88
Real estate taken over.....	15,588 86
Examining fees	45 00
Set aside to contingent fund.....	1,480 00
Bonds	36,935 00
Liberty Bonds financed.....	25,025 00
Warrants	3,401 97
Real estate contracts.....	28,257 61
Interest	651 02
Bills payable	8,000 00
Contingent fund	2,361 55
Commissions on sales.....	168 70
Cash on hand June 30, 1919.....	49,798 48
Total disbursements and cash balance.....	\$483,149 59

ASSETS

Cash on hand.....	\$49,798 48
Real estate loans.....	441,355 84
Stock loans	7,716 50
Bonds and warrants.....	40,447 85
Real estate owned.....	69,731 83
Real estate sold under contract.....	15,797 05
Advances on account of loans.....	13,909 59
Furniture and fixtures and office building.....	31,292 72
Tax account	933 96
Accrued interest	9,392 40
Total assets	\$680,376 22
Interest due and uncollected.....	9,392 40

LIABILITIES

Stock	\$635,878 71
Contingent fund	13,184 06
Undivided profits, less expense, \$3,561.80.....	17,114 72
Loans due and incomplete.....	10,000 00
Reserve fund	4,198 73
Total liabilities	\$680,376 22
Interest due and uncollected.....	9,392 40

FIDELITY SAVINGS AND LOAN ASSOCIATION, OF SPOKANE, WASHINGTON.

OFFICERS

OTTO W. SPERLING, President. F. S. McWILLIAMS, Secretary.
F. S. McWILLIAMS, Treasurer.
McWILLIAMS, WELLER & BROWN, Attorneys.

DIRECTORS

O. C. JENSEN, H. L. McWILLIAMS, ROBERT WEIR, THOS. F. CONLAN,
M. B. CONNELLY, E. F. CARTIER VAN DISSEL, L. J. MCATEE,
OTTO W. SPERLING, MICHAEL LANG, C. D. ROBINSON,
F. S. McWILLIAMS.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	1,490
Number of shares sold during the year (estimated).....	1,000
Number of shares cancelled and withdrawn during year (estimated)	1,588
Number of shares in force at close of year (estimated).....	13,300
Amount of membership fee per share charged.....	None
Rate of annual dividend declared for year past.....	5%

RECEIPTS

Installments or dues on stock.....	\$330,662 12
Repayments on loans.....	112,244 46
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	30,000 00
Real estate sold (payments actually made on contracts).....	3,202 59
Insurance, taxes and other advances refunded.....	7,674 76
Interest	46,036 37
*Rents from real estate (home office building only).....	4,616 14
Stock loans repaid.....	23,503 88
Debenture bonds	2,500 00
Penalties on delinquent loans.....	133 73
Bonds and warrants sold (Liberty Bonds, etc.).....	84,502 99
Sale and income from real estate (other than home office).....	3,687 08
Sundries (including cross entries).....	15,556 96
Cash on hand July 1, 1918.....	46,222 74
Total receipts and balances.....	\$710,543 82

DISBURSEMENTS

Real estate loans (actual amount paid out).....	\$219,226 64
Stock loans	37,739 85
Borrowed money paid.....	30,000 00
Interest on borrowed money.....	1,715 66
Insurance and taxes advanced.....	8,382 40
Withdrawals of stock.....	227,993 35
Dividends	28,267 36
Salary of officers and directors.....	3,496 00
Office help, rent, etc.....	6,566 88
Upkeep of home office building.....	1,522 35
Old membership fees refunded to members.....	179 00
Bonds and warrants purchased (Liberty Bonds, etc.).....	79,357 06
Credited to contingent fund.....	1,975 00

* Rents collected from real estate acquired through foreclosure are not included as earnings but credited direct to real estate to pay for upkeep and reduce book value.

Real estate acquired and upkeep.....	5,353 65
Contracts issued on real estate.....	5,084 26
Sundries (including cross entries).....	14,183 44
Cash on hand June 30, 1919.....	39,500 92
Total disbursements and cash balance.....	\$710,543 82

ASSETS

Cash on hand.....	\$39,500 92
Real estate loans.....	598,805 36
Stock loans	21,470 97
Bonds and warrants.....	16,998 57
Real estate owned (including home office).....	63,253 19
Real estate sold under contract.....	10,854 98
Advances on account of loans.....	3,262 14
Furniture and fixtures.....	2,476 50
Accrued interest	2,588 79
Total assets	\$759,211 42

LIABILITIES

Stock	\$695,145 67
Liberty Bond payments.....	4,143 13
Contingent fund	8,000 00
Undivided profits	28,422 62
Debenture bonds	23,500 00
Total liabilities	\$759,211 42

**SPOKANE SAVINGS AND LOAN ASSOCIATION, OF SPOKANE,
WASHINGTON.**

OFFICERS

FRED N. MARTIN, President.	J. L. COOPER, Secretary.
J. L. COOPER, Treasurer.	ROGER M. JAMIESON, Asst. Secretary.
HAMBLÉN & GILBERT, Attorneys.	

DIRECTORS

FRED N. MARTIN, W. S. GILBERT, ALEX. TURNBULL, GEO. A. PHILLIPS, J. L. COOPER, FRED W. KIESLING, C. H. WEEKS, A. W. LINDSAY, WALTER M. BURNS, C. A. NICKUM, WM. FITZGERALD, J. W. WENTWORTH, DR. H. L. MOREHOUSE, W. H. UDE, J. W. BURGAN.
--

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	2,350
Number of shares sold during the year.....	8,461.8
Number of shares cancelled and withdrawn during the year.....	5,384.2
Number of shares in force at close of year.....	12,733.7
Amount of membership fee per share charged.....	None
Rate of annual dividend declared for year past.....	5%

RECEIPTS

Installments or dues on stock.....	\$846,183 73
Repayments on loans.....	168,881 28
Borrowed money under Sec. 8, Ch. 110, Laws 1913 (stock and bond loans)	18,877 48
Real estate sold under contract.....	4,502 83
Insurance, taxes and other advances refunded.....	14,835 41
Interest	68,384 03
Rents from real estate.....	6,432 80
Real estate	1,438 46
Dividends on stock.....	88 99
War Savings Stamps.....	2,006 31
Liberty Bonds	66,024 86
United States Treasury Certificates.....	60,000 00
Cash exchange	22,084 06
Reserve	5,000 00
Profit and loss.....	5 75
Cash on hand July 1, 1918.....	50,089 66

Total receipts and balances.....\$1,834,835 65

DISBURSEMENTS

Real estate loans.....	\$420,919 22
Stock and bond loans.....	32,350 50
Borrowed money paid.....	4,000 00
Interest on borrowed money.....	1,555 30
Insurance and taxes advanced.....	9,799 22
Withdrawals of stock.....	538,427 86
Dividends	45,479 68
Salary of officers and directors.....	4,144 50
Office help, rent, etc.....	9,562 33
Legal services	250 00
Real estate contracts.....	3,249 95
Real estate	3,571 98
War Savings Stamps.....	1,973 90
Liberty Bonds	72,461 00
Profit and loss.....	45 90
Expense advances, account loans.....	2,550 27
United States Treasury Certificates.....	50,000 00
Interest	60 85
Furniture and equipment.....	40 00
Cash exchange	22,084 06
Cash on hand June 30, 1919.....	112,309 13

Total disbursements and cash balance.....\$1,834,835 65

ASSETS

Cash on hand.....	\$112,309 13
Real estate loans.....	1,072,990 74
Stock loans and bond loans.....	18,439 54
Bonds and warrants.....	26,023 23
Real estate owned.....	96,729 66
Real estate sold under contract.....	26,442 20
Advances on account of loans.....	7,749 54
Furniture and fixtures.....	1,200 00

Total assets

\$1,861,884 04

Interest due and uncollected.....8,500 00

LIABILITIES

Stock	\$1,273,376 08
Contingent fund	12,000 00
Undivided profits	28,776 97
Loans due and incomplete.....	30,996 98
Mortgages payable	25,000 00
Accounts payable	234 01
Total liabilities	\$1,370,384 04
Interest due and uncollected.....	8,500 00

**MODERN SAVINGS AND LOAN ASSOCIATION, OF TACOMA,
WASHINGTON.**

OFFICERS

F. G. FISHER, President.	F. H. ATCHINSON, Secretary.
O. S. LARSON, Treasurer.	J. CHARLES DENNIS, Attorney.

DIRECTORS

F. G. FISHER, O. S. LARSON, J. CHARLES DENNIS, F. H. ATCHINSON, W. F. WINDLEY, C. D. MURDOCH, L. RICHTER, F. M. WALLER, M. C. ATCHINSON, J. R. KEELING.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	91
Number of shares sold during the year.....	63
Number of shares cancelled and withdrawn during the year.....	121
Number of shares in force at close of year.....	1,034
Amount of membership fee per share charged.....	\$2 00
Rate of annual dividend declared for year past.....	8%

RECEIPTS

Installments or dues on stock.....	\$10,744 24
Repayments on loans.....	14,246 71
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	1,800 00
Real estate sold.....	712 10
Interest	4,433 14
Rents from real estate.....	60 00
Membership fees collected.....	124 40
Cash on hand July 1, 1918.....	1,106 38
Total receipts and balances.....	\$33,226 97

DISBURSEMENTS

Real estate loans.....	\$11,210 54
Stock loans	1,440 00
Borrowed money paid.....	2,900 00
Interest on borrowed money.....	38 10
Insurance and taxes advanced.....	243 84
Withdrawals of stock.....	5,495 74
Dividends	3,916 34
Office help, rent, etc.....	389 75
Commission on stock (membership fees).....	113 40
Incomplete loans	2,900 00
Cash on hand June 30, 1919.....	4,579 26

Total disbursements and cash balance.....	\$33,226 97
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ASSETS

Cash on hand.....	\$4,579 26
Real estate loans.....	41,094 82
Stock loans	2,981 49
Bonds and warrants (United States Liberty Bonds).....	5,500 00
Real estate owned.....	525 00
Real estate sold under contract.....	1,155 52
Advances on account of loans.....	353 10
Accrued interest (not due).....	166 01
Personal accounts	5 48
Total assets	\$56,360 68

LIABILITIES

Stock	\$54,244 71
Cash dividends, due July 1, 1919.....	721 28
Contingent fund	1,056 82
Undivided profits	387 87
Total liabilities	\$56,360 68

**NORTHWESTERN BUILDING AND LOAN ASSOCIATION, OF TACOMA,
WASHINGTON.**

OFFICERS

H. G. WILLIAMS, President.	C. L. ROBERTS, Secretary.
H. E. O'NEAL, Treasurer.	JUDGE J. M. ARNTSON, Attorney.

DIRECTORS

H. G. WILLIAMS, JOHN BLAAUW, R. R. SPRINKLE, ARTHUR BOUCHER, E. F. GREGORY, C. L. ROBERTS, GEORGE H. SELLS, H. E. O'NEAL, JOHN A. REA.
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Amount of authorized capital.....	\$5,000,000 00
Par value	\$100 00
Number of members.....	306
Number of shares sold during the year.....	149
Number of shares cancelled and withdrawn during the year.....	178
Number of shares in force at close of year.....	1,855
Amount of membership fee per share charged.....	None
Rate of annual dividend declared for year past.....	6%

RECEIPTS

Installments or dues on stock.....	\$24,702 84
Repayments on loans and advances.....	41,767 58
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	11,000 00
Real estate contracts.....	762 11
Interest	8,581 88
Rents from office.....	60 00
Cash on hand July 1, 1918.....	4,660 69
Total receipts and balances.....	\$91,535 10

DISBURSEMENTS

Real estate loans and advances.....	\$62,262 76
Interest on borrowed money.....	266 66
Withdrawals of stock.....	17,232 92
Dividends	5,428 89
Salary of officers and directors.....	1,563 00
Office help, rent, etc.....	752 50
Taxes on real estate.....	32 15
Cash on hand June 30, 1919.....	4,036 22

Total disbursements and cash balance..... \$91,535 10

ASSETS

Cash on hand.....	\$4,036 22
Real estate loans.....	110,113 13
Real estate owned.....	1,338 76
Real estate sold under contract.....	1,341 56
Accrued interest	875 11
Furniture and fixtures.....	219 00

Total assets \$117,923 78
Interest due and uncollected..... 875 11

LIABILITIES

Stock—Savings	\$55,445 51
Stock—Paid	49,442 48
Contingent fund	1,800 49
Undivided profits	235 30
Loans from bank.....	11,000 00

Total liabilities \$117,923 78
Interest due and uncollected..... 875 11

THE PACIFIC BUILDING AND LOAN ASSOCIATION, OF TACOMA, WASHINGTON.

OFFICERS

W. H. REID, President. WALTER F. McDOWELL, Secretary.
A. NEHAMMER, Treasurer. J. T. S. LYLE, Attorney.

DIRECTORS

C. E. BUCKLEY, B. E. BUCKMASTER, J. I. GILMORE, B. E. LEMLEY,
J. T. S. LYLE, JAS. A. O'NEIL, W. H. REID, GEO. P. WRIGHT.

Amount of authorized capital.....	\$30,000,000 00
Par value	\$100 00
Number of members.....	16,081
Number of shares sold during the year.....	38,354
Number of shares cancelled and withdrawn during the year.....	25,133½
Number of shares in force at close of year.....	217,044½
Amount of membership fee per share charged.....	\$2 00
Rate of annual dividend declared for year past.....	8%

RECEIPTS

Installments or dues on stock.....	\$599,584 96
Repayments on loans.....	423,839 83
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	50,000 00

Real estate sold.....	5,014 32
Insurance, taxes and other advances refunded.....	4,447 98
Interest	188,533 65
Rents from real estate.....	6,151 59
Membership fees collected.....	79,701 50
Stock loans repaid.....	35,267 23
Payments on real estate contracts.....	14,626 46
Suspense	15,523 50
Transfer fees	127 20
Safe deposit box rents.....	52 75
Commissions on loans.....	4,394 37
Miscellaneous	925 55
Overdraft June 30, 1919.....	30,977 23
Cash on hand July 1, 1918.....	36,510 66
Total receipts and balances.....	\$1,495,678 78

DISBURSEMENTS

Real estate loans.....	\$836,083 89
Stock loans	49,345 74
Insurance and taxes advanced.....	10,304 22
Withdrawals of stock.....	433,566 00
Salary of officers and directors.....	19,043 87
Office help, rent, etc.....	9,982 85
Legal services and license fees.....	901 29
Commission on loans.....	7,055 33
Commission on stock (membership fees).....	71,155 75
Commissions on collections.....	7,896 62
Printing and stationery.....	5,484 86
Suspense	19,467 53
Telephone, telegrams and postage.....	2,885 35
Real estate expense.....	3,399 66
Real estate taxes.....	3,059 95
Liberty Bonds	15,350 00
Miscellaneous	351 75
Profit and loss.....	344 12
Cash on hand June 30, 1919—(See Receipts, overdraft).	
Total disbursements and cash balance.....	\$1,495,678 78

ASSETS

Real estate loans.....	\$2,093,228 69
Stock loans	76,539 79
Liberty Bonds	26,350 00
Real estate owned.....	64,704 49
Real estate sold under contract.....	32,769 82
Advances on account of loans.....	15,419 67
Furniture and fixtures.....	3,000 00
Total assets	\$2,312,012 46
Interest due and uncollected.....	5,959 88

LIABILITIES

Stock	\$2,091,581 68
Overdraft, June 30, 1919.....	30,977 23
Contingent fund	25,228 70
Undivided profits	78,001 93
Loans due and incomplete.....	41,842 50
Loans from bank.....	50,000 00
Suspense	340 30
Total liabilities	\$2,317,972 34

**THE PEOPLES SAVINGS AND LOAN ASSOCIATION, OF TACOMA,
WASHINGTON.**

OFFICERS

J. F. AUSTIN, President.
C. W. DU BOIS, Treasurer.

W. L. VERGIN, Secretary.
J. H. GORDON, Attorney.

DIRECTORS

J. F. AUSTIN, C. P. GAMMON, J. H. GORDON, C. W. DU BOIS, W. L. VERGIN,
A. GUDREYAN, M. OPGENORTH.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	532
Number of shares sold during the year.....	3,236
Number of shares cancelled and withdrawn during the year.....	1,822
Number of shares in force at close of year.....	5,314
Amount of membership fee per share charged.....	\$2 00
Rate of annual dividend declared for year past.....	8%

RECEIPTS

Installments or dues on stock.....	\$61,695 55
Repayments on loans.....	12,057 27
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	23,100 00
Interest	3,920 39
Membership fees collected.....	4,328 76
Stock loans	2,001 50
Loan fees	581 16
General expense fund.....	1,204 11
Contingent fund	73 01
Liberty Bonds	300 00
Cash on hand July 1, 1918.....	3,540 11
Total receipts and balances.....	\$112,801 86

DISBURSEMENTS

Real estate loans.....	\$74,584 67
Stock loans	375 50
Borrowed money paid.....	11,900 00
Interest on borrowed money.....	93 15
Withdrawals of stock.....	14,151 88
Dividends	1,677 88
Commission on stock (membership fees).....	3,337 53
Operating expense	2,547 30
Collection commission	179 97
Furniture and fixtures.....	471 85
Accounts receivable	2,100 00
Cash on hand June 30, 1919.....	1,382 13
Total disbursements and cash balance.....	\$112,801 86

ASSETS

Cash on hand.....	\$1,382 13
Real estate loans.....	77,376 84
Furniture and fixtures.....	597 55
Accounts receivable	2,100 00
Total assets	\$81,456 52
Interest due and uncollected.....	346 70

LIABILITIES

Stock	\$67,687 03
Contingent fund	77 71
Undivided profits	2,491 78
Bills payable	11,200 00
Total liabilities	\$81,456 52
Interest due and uncollected.....	346 70

**STATE BUILDING AND LOAN ASSOCIATION, OF TACOMA,
WASHINGTON.**

OFFICERS

L. E. PASKILL, President.	GEO. RUSSELL, Secretary.
KARL E. MARSH, Treasurer.	A. O. BURMEISTER, Attorney.

DIRECTORS

G. W. ANDERSON, S. H. BRAMMER, A. O. BURMEISTER, WM. CALLAHAN, JOHN CHALMERS, E. C. HILL, T. J. HAMILTON, GEO. RUSSELL, KARL E. MARSH, L. E. PASKILL.

Amount of authorized capital.....	\$8,000,000 00
Par value	\$100 00
Number of members.....	3,763
Number of shares sold during the year.....	10,141
Number of shares cancelled and withdrawn during the year.....	7,381
Number of shares in force at close of year.....	57,576
Amount of membership fee per share charged.....	\$2 00
Rate of semi-annual dividends declared for year past (per annum)...	8%

RECEIPTS

Installments or dues on stock.....	\$351,318 75
Repayments on loans.....	191,009 66
Bills payable	59,138 00
Borrowed money under Sec. 8, Ch. 110, Laws 1913 (debenture bonds)	18,400 00
Real estate sold.....	2,893 50
Insurance, taxes and other advances refunded.....	3,335 74
Interest	83,739 45
Rents from real estate.....	164 90
Membership fees collected.....	8,081 47
Stock loans repaid.....	4,533 60
Loan fees	2,160 00
Expense refunds	1,951 62
Collateral loans repaid.....	140 00
Suspense items	4,565 73
Exchange checks	4,546 24
Furniture and fixtures sold.....	450 00
Accounts receivable	55 00
Cash on hand July 1, 1918.....	12,476 21
Total receipts and balances.....	\$748,959 87

DISBURSEMENTS

Real estate loans.....	\$498,298 80
Borrowed money paid.....	51,000 00
Interest on borrowed money.....	458 32
Insurance and taxes advanced.....	9,497 38
Withdrawals of stock.....	94,275 22
Dividends paid in cash.....	25,309 52
Salary of officers and directors; office help, rent, etc.....	11,595 96
Commission on stock (membership fees).....	3,219 15
Other agency expense.....	8,081 47
Loan expense	2,160 00
Stock loans	14,448 25
Collateral loans	420 00
Real estate expense.....	500 16
Exchange checks	4,546 24
Suspense	3,923 20
Furniture and fixtures.....	153 20
Liberty Bonds	3,100 00
Accounts receivable	90 00
Cash on hand June 30, 1919.....	17,883 00

Total disbursements and cash balance..... \$748,959 87

ASSETS

Cash on hand.....	\$17,883 00
Real estate loans.....	1,009,045 14
Stock loans	17,624 64
Liberty Bonds	5,100 00
Real estate owned.....	11,162 84
Real estate sold under contract.....	11,475 75
Advances on account of loans.....	6,212 36
Furniture and fixtures.....	1,918 24
Loans on Liberty Bonds.....	320 00
Accrued interest	6,000 00
Accounts receivable	35 00
Suspense items	219 68

Total assets\$1,086,996 65

LIABILITIES

Stock	\$998,799 82
Debenture bonds	21,000 00
Bills payable	20,000 00
Contingent fund	8,742 81
Undivided profits	37,737 36
Loans due and incomplete.....	716 66

Total liabilities\$1,086,996 65

**TACOMA SAVINGS AND LOAN ASSOCIATION, OF TACOMA,
WASHINGTON.**

OFFICERS

ALFRED LISTER, President. WM. P. HOPPING, Secretary.
BEN HAVERKAMP, Treasurer. FRANK D. NASH, Attorney.

DIRECTORS

FRANK E. BEAL, H. H. BLACKBURN, H. B. DEWEY, BEN HAVERCAMP,
FRANK M. LAMBORN, ALFRED LISTER, GEO. C. SCHEMPF,
ALBERT MILLER, W. C. MILLER, JACOB F. VISELL,
AUGUST VON BOECKLIN.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	1,018
Number of shares sold during the year.....	3,167
Number of shares cancelled and withdrawn during the year.....	1,741
Number of shares matured during the year.....	694
Number of shares in force at close of year.....	14,826
Amount of membership fee per share charged—25c per share prior to January 1, 1919; after January 1, 1919.....	None
Rate of annual dividend declared for year past.....	8½%

RECEIPTS

Installments or dues on stock.....	\$137,221 50
Repayments on loans.....	174,104 36
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	41,000 00
Insurance, taxes and other advances refunded.....	2,668 44
Interest	51,434 89
Bonds issued	34,600 00
Membership fees collected.....	387 00
Payments on contracts.....	5,794 42
Payments on stock loans.....	21,742 00
Fines	731 46
Accrued interest	5,133 10
Transfer fees	7 00
Payments on real estate.....	893 65
Cash on hand July 1, 1918.....	4,172 79
Total receipts and balances.....	\$479,890 61

DISBURSEMENTS

Real estate loans.....	\$243,047 47
Stock	20,860 00
Borrowed money paid.....	29,000 00
Interest on borrowed money and bonds.....	4,908 99
Insurance and taxes advanced.....	581 05
Withdrawals of stock.....	67,332 20
Salary of officers and directors.....	6,386 41
Commission on stock (membership fees).....	387 00
Matured stock—457 shares Series "A-1"; 79 shares Series "B-1"; 158 shares Series "C-1"	69,420 53
Real estate	172 22
United States Bonds.....	23,150 00
Bonds	10,300 00
Cash on hand June 30, 1919.....	4,344 74
Total disbursements and cash balance.....	\$479,890 61

ASSETS

Cash on hand.....	\$4,344 74
Real estate loans.....	591,757 66
Stock loans	28,519 00
United States Liberty and Victory Bonds.....	40,600 00
Real estate owned.....	2,825 13
Real estate sold under contract.....	24,256 50
Advances on account of taxes and assessments.....	4,844 08
Furniture and fixtures.....	900 00
Dues	2,526 00
Interest and fines.....	3,556 70

Total assets \$704,129 81

LIABILITIES

Stock—Installment	\$372,238 00
Stock—Fully paid	31,800 00
Advance dues	1,618 50
Contingent fund	15,229 51
Undivided profits	127,084 03
Loans due and incomplete.....	43,645 02
Bills payable	12,000 00
Bonds outstanding	97,800 00
Interest on bonds.....	2,714 75

Total liabilities \$704,129 81

**UNITED STATES SAVINGS AND LOAN SOCIETY, OF TACOMA,
WASHINGTON.**

OFFICERS

E. J. WALSH, President.
W. H. PRINGLE, Treasurer.

J. G. MARCH, Secretary.
MICHAEL DOWD, Attorney.

DIRECTORS

E. J. WALSH, D. A. WORDEN, J. G. MARCH, W. H. PRINGLE, J. H. MARCH,
J. F. RICHARDS, THOS. CARSTENS, F. N. McCANDLESS,
E. C. WHEELER.

Amount of authorized capital.....	\$5,000,000 00
Par value	\$100 00
Number of members.....	110
Number of shares sold during the year.....	15
Number of shares cancelled and withdrawn during the year.....	96
Number of shares in force at close of year.....	1,210
Amount of membership fee per share charged.....	\$2 00
Rate of annual dividend declared for year past.....	7%

RECEIPTS

Installments or dues on stock.....	\$3,854 07
Repayments on loans (real estate).....	2,584 55
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	1,490 00
Interest	842 86
Membership fees collected.....	30 00
Repayment on loans (stock).....	187 00
Cash on hand July 1, 1918.....	179 70

Total receipts and balances..... \$9,168 18

DISBURSEMENTS

Real estate loans.....	\$5,450 00
Stock	1,255 93
Borrowed money paid.....	1,490 00
Interest on borrowed money.....	10 09
Dividends	561 25
Office help, rent, etc.....	61 09
Commission on stock (membership fees).....	40 00
Loans (stock)	275 00
Cash on hand June 30, 1919.....	24 82
Total disbursements and cash balance.....	\$9,168 18

ASSETS

Cash on hand.....	\$24 82
Real estate loans.....	11,270 37
Stock loans	382 50
Total assets	\$11,677 69
Interest due and uncollected.....	53 02

LIABILITIES

Stock	\$11,075 58
Contingent fund	76 26
Undivided profits	525 85
Total liabilities	\$11,677 69
Interest due and uncollected.....	53 02

**WALLA WALLA SAVINGS AND LOAN ASSOCIATION, OF
WALLA WALLA, WASHINGTON.**

OFFICERS

E. E. SHAW, President.	E. E. WRIGHT, Secretary.
E. E. WRIGHT, Treasurer.	A. H. REYNOLDS, Attorney.

DIRECTORS

GEORGE E. KELLOUGH, GRANT S. BOND, E. E. WRIGHT, JOHN SMITH,
D. P. SHEPHERD, E. E. SHAW, A. H. REYNOLDS, J. A. BAILEY,
THOS. F. RODGERS.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	138
Number of shares sold during the year.....	198
Number of shares cancelled and withdrawn during the year.....	270
Number of shares in force at close of year.....	2,029
Amount of membership fee per share charged.....	None
Rate of annual dividend declared for year past.....	7%

RECEIPTS

Installments or dues on stock.....	\$19,790 23
Repayments on loans.....	13,425 33
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	8,000 00
Insurance, taxes and other advances refunded.....	12 07
Interest	7,609 71
Bonus for privilege of paying loans before due (1%).....	96 12
Cash on hand July 1, 1918.....	4,929 10
Total receipts and balances.....	\$53,862 56

DISBURSEMENTS	
Real estate loans.....	\$19,952 54
Stock loans	750 00
Borrowed money paid.....	1,000 00
Interest on borrowed money.....	1,111 78
Withdrawals of stock.....	26,552 94
Salary of officers and directors.....	300 00
Office help, rent, etc.....	144 79
Debenture bonds	2,000 00
Cash on hand June 30, 1919.....	2,050 51

Total disbursements and cash balance..... \$53,862 56

ASSETS	
Cash on hand.....	\$2,050 51
Real estate loans.....	96,283 33
Stock loans	700 00
Furniture and fixtures.....	100 00
Total assets	\$99,133 84

LIABILITIES	
Stock	\$82,965 88
Debenture bonds	5,801 95
Contingent fund	1,678 98
Undivided profits	1,687 03
Bills payable (temporary loans).....	7,000 00
Total liabilities	\$99,133 84
Interest due and uncollected.....	535 19

INTER-STATE BUILDING, LOAN AND TRUST ASSOCIATION, OF WALLA WALLA, WASHINGTON.

OFFICERS

F. W. PAINE, President.	E. H. NIXON, Vice-President.
W. P. LATHROP, Secretary.	B. F. CULP, Treasurer.
T. A. PAUL, Attorney.	

DIRECTORS

F. W. PAINE, E. H. NIXON, B. E. LaDUE, O. P. JAYCOX, I. W. SIMS,
OSCAR DRUMHELLER, G. S. BOND.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	532
Number of shares sold during the year.....	1,009
Number of shares cancelled and withdrawn during the year.....	1,209
Number of shares in force at close of year.....	6,253
Amount of membership fee per share charged.....	None
Rate of annual dividend declared for year past.....	7%

RECEIPTS	
Installments or dues on stock.....	\$79,825 43
Repayments on loans.....	15,269 43
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	15,500 00
Insurance, taxes and other advances refunded.....	1,859 23
Interest	22,999 60
Debenture bonds	29,450 00
Cash on hand July 1, 1918.....	11,602 81
Total receipts and balances.....	\$176,506 50

DISBURSEMENTS

Real estate loans.....	\$43,817 31
Stock	10,020 00
Borrowed money paid.....	15,500 00
Interest on borrowed money, including paid-up stock and debenture bonds	4,721 55
Insurance and taxes advanced.....	2,647 64
Withdrawals of stock.....	48,533 68
Salary of officers and directors.....	2,615 00
Rent	360 00
Advertising and printing.....	144 00
Stationery and supplies.....	1 10
Furniture and fixtures.....	46 67
Sundries	127 49
Paid-up stock	5,800 00
Debenture bonds	30,550 00
Postage and telegrams.....	31 60
Traveling expenses	37 66
Cash on hand June 30, 1919.....	11,552 80
Total disbursements and cash balance.....	\$176,506 50

ASSETS

Cash on hand.....	\$11,552 80
Real estate loans.....	\$273,934 55
Stock loans	6,597 11
Bonds and warrants.....	50 00
Real estate owned.....	8,310 49
Furniture and fixtures.....	443 12
Insurance and taxes advanced.....	13,955 95
Total assets	\$314,844 02
Interest due and uncollected.....	5,955 04

LIABILITIES

Stock	\$212,808 52
Paid-up stock	37,880 00
Debenture bonds	43,800 00
Contingent fund	12,441 69
Undivided profits	7,913 81
Total liabilities	\$314,844 02
Interest due and uncollected.....	5,955 04

**THE YAKIMA SAVINGS AND LOAN ASSOCIATION, OF YAKIMA,
WASHINGTON.**

OFFICERS

PHIL A. DITTER, President. LOGAN H. ROBERTS, Secretary.
FRANK BARTHOLET, Treasurer. LOGAN H. ROBERTS, Attorney.

DIRECTORS

W. I. LINCE, A. H. HUEBNER, FRANK BARTHOLET, PHIL A. DITTER,
W. A. BELL, D. C. REED, WM. H. REDMAN.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of investment members.....	422
Amount of membership fee per share charged.....	\$1 00
Rate of annual dividend declared for year past.....	6%

RECEIPTS

Installments or dues on stock.....	\$138,565 81
Repayments on loans.....	90,421 32
Real estate sold.....	1,416 69
Insurance, taxes and other advances refunded.....	1,974 54
Interest	20,722 14
Rents from real estate.....	645 00
Membership fees collected.....	1,854 10
Stock loans	13,497 87
Bills payable, notes to bank, etc.....	33,000 00
Miscellaneous	95 94
Cash on hand July 1, 1918.....	2,276 67
Total receipts and balances.....	\$304,470 08

DISBURSEMENTS

Real estate loans.....	\$175,262 47
Stock	15,109 00
Borrowed money paid.....	42,000 00
Interest on borrowed money.....	488 53
Insurance and taxes advanced.....	2,898 13
Withdrawals of stock.....	38,034 94
Dividends, cash	6,359 05
Salary of officers and directors.....	2,510 00
Office help, rent, etc.....	942 83
Commission on stock (membership fees).....	1,854 10
Expended on real estate.....	1,105 78
Suspense account	155 00
Release fees	34 50
Miscellaneous (Liberty Bonds \$1,300.00, etc.).....	1,442 94
Cash on hand June 30, 1919.....	16,272 76
Total disbursements and cash balance.....	\$304,470 08

ASSETS

Cash on hand.....	\$16,272 76
Real estate loans.....	335,431 52
Stock loans	9,032 59
Real estate owned.....	7,801 39
Real estate sold under contract.....	3,520 51
Advances on account of loans.....	2,009 53
Furniture and fixtures.....	404 75
Liberty Bonds	4,000 00
Total assets	\$378,473 35

LIABILITIES

Due to members.....	\$356,980 69
Contingent fund	8,841 59
Undivided profits	12,651 07
Total liabilities	\$378,473 35

THE LIBERTY SAVINGS AND LOAN ASSOCIATION, OF YAKIMA, WASHINGTON.

OFFICERS

W. D. WRIGHTER, President.
J. L. CLIFT, Treasurer.

JOHN F. CHESTERLEY, Secretary.
JOHN F. CHESTERLEY, Attorney.

DIRECTORS

H. STANLEY COFFIN, I. H. DILLS, ROBERT W. RUNDSTROM, R. D. ROVIG,
WM. T. HINES, FRED T. MOORE, W. L. DIMMICK, D. C. REED,
FRANK HORSLEY, FRED M. RAYMOND, A. N. CRYAN,
W. D. WRIGHTER.

Amount of authorized capital.....	\$2,000,000 00
Par value	\$100 00
Number of members.....	55
Number of shares sold during the year.....	411
Number of shares cancelled and withdrawn during the year.....	None
Number of shares in force at close of year.....	411
Amount of membership fee per share charged (not to exceed a total of \$10.00)	\$1 00

RECEIPTS

Installments or dues on stock.....	\$4,089 76
Borrowed money under Sec. 8, Ch. 110, Laws 1913.....	6,500 00
Membership fees collected.....	101 00
Received account incomplete loans.....	9 05
Total receipts and balances.....	\$10,699 81

DISBURSEMENTS

Real estate loans.....	\$9,296 80
Borrowed money paid.....	500 00
Interest on borrowed money.....	33 80
Office help, rent, etc.....	121 34
Cash on hand June 30, 1919.....	635 17
Total disbursements and cash balance.....	\$10,699 81

ASSETS

Cash on hand.....	\$635 17
Real estate loans.....	12,900 00
Expenses for stationery, etc.....	155 14
Total assets	\$13,690 31
Interest due and uncollected.....	51 00

LIABILITIES

Stock	\$3,977 06
Bills payable	6,000 00
Membership fees collected.....	101 00
Loan expense collected.....	235 45
Loans due and incomplete.....	3,376 80
Total liabilities	\$13,690 31

EQUITABLE SAVINGS AND LOAN ASSOCIATION, OF PORTLAND, OREGON.

OFFICERS

CHAS. E. LADD, President. C. W. HAYHURST, Secretary.
EDWARD COOKINGHAM, Vice-President and Manager.
W. M. CAKE, Attorney.

DIRECTORS

CHAS. E. LADD, EDWARD COOKINGHAM, F. McKERCHER, W. M. CAKE,
C. W. HAYHURST, WALTER MacKAY, JOS. A. MURPHY.

Amount of authorized capital.....	\$15,000,000 00
Par value	\$100 00
Number of members (approximately).....	12,500
Number of shares sold during the year.....	22,353
Number of shares cancelled and withdrawn during the year.....	23,469
Number of shares in force at close of year.....	114,086
Amount of membership fee per share charged.....	\$2 00
Rate of annual dividend declared for year past (3% semi-annually) ..	6%

RECEIPTS

Installments or dues on stock.....	\$338,105 37
Repayments on loans.....	1,023,712 07
Insurance, taxes and other advances refunded.....	24,860 49
Interest	279,164 81
Membership fees collected.....	23,723 29
Loan promotion fund.....	6,891 90
Fees for examining titles.....	1,547 50
Fees for appraising properties.....	445 50
Bond account	154,426 89
Employees' Liberty Bond account.....	5,517 50
Other accounts	2,314 60
Cash on hand July 1, 1918.....	222,048 80
Total receipts and balances.....	\$2,582,758 72

DISBURSEMENTS

Real estate loans.....	\$1,358,824 63
Stock loans	69,556 50
Loans on Liberty Bonds.....	3,805 00
Insurance and taxes advanced.....	12,178 67
Withdrawals of stock (including maturities and earnings).....	534,250 49
Dividends	39,187 56
Salary of officers and directors.....	10,450 00
Office help, rent, etc.....	47,485 05
Legal services (examination of titles).....	1,547 50
Commission on loans (agents' and expenses).....	6,891 90
Commission on stock (membership fees) (agents' and expenses).....	21,473 29
Bond account	346,107 40
Appraisal fees	445 50
Reserve fund surplus.....	9,225 00
Employees' Liberty Bond account.....	5,517 50
Other accounts	7,169 61
Cash on hand June 30, 1919.....	108,643 12
Total disbursements and cash balance.....	\$2,582,758 72

ASSETS

Cash on hand.....	\$108,643 12
Real estate loans (net).....	3,563,285 21
Stock loans	81,918 00
Loans on Liberty Bonds.....	1,785 00
Bonds and warrants (United States and municipal).....	361,249 61
Advances on account of loans, taxes, insurance and assessments.....	21,229 66
Furniture and fixtures.....	1,933 48
Total assets	\$4,140,044 08
Interest due and uncollected (approximately).....	6,500 00

LIABILITIES

Stock (payments and credited earnings).....	\$3,785,435 22
Contingent fund (reserve fund and undivided profits).....	151,391 45
Undivided profits	108,978 52
Loans due and incomplete.....	93,866 29
Other accounts	372 60
Total liabilities	\$4,140,044 08
Interest due and uncollected (approximately).....	6,500 00

WESTERN LOAN AND BUILDING COMPANY, OF SALT LAKE CITY, UTAH.

OFFICERS

P. W. MADSEN, President.

R. W. MADSEN, Treasurer.

DR. JOHN T. WHITE, Secretary.

JAMES INGEBRETSEN, Attorney.

DIRECTORS

JAMES INGEBRETSEN, V. R. MADSEN, P. W. MADSEN, JOHN T. WHITE,
R. W. MADSEN.

Amount of authorized capital.....	\$20,000,000 00
Par value	\$100 00
Number of members (not including borrowers).....	11,113
Number of shares sold during the year.....	96,978
Number of shares cancelled and withdrawn during the year.....	54,334
Number of shares in force at close of year.....	193,427
Amount of membership fee per share charged.....	
....."CC" \$1.50; "E" \$1.00; "H" \$1.50; "F" \$1.00	
Rate of annual dividend declared for year past.....	11%

RECEIPTS

Installments or dues on stock.....	\$538,108 55
Repayments on loans (real estate).....	760,928 58
Repayment on permanent reserve fund contract.....	10,529 64
General fund and permanent reserve fund, real estate.....	8,830 23
Insurance, taxes and other advances refunded.....	31,564 22
Interest	320,078 47
Sundry accounts	345,756 91
Membership fees collected.....	23,642 39
"Paid-up stock"	11,300 00
Savings and extra payment.....	194,810 47
Repayment on stock loans.....	48,067 19
General fund credits.....	109,464 91
Attorney or examination of abstract fees.....	5,445 00

Agents' accounts	12,199 32
Exchange and transfer of deposits.....	131,139 15
Cash on hand July 1, 1918.....	126,929 78
Total receipts and balances.....	\$2,678,794 81

DISBURSEMENTS

Real estate loans.....	\$1,015,648 83
Stock loans	39,649 62
Withdrawals (savings and extra payment).....	102,424 33
Interest and discount.....	4,370 76
Insurance and taxes advanced (including advance in foreclosure)....	44,290 03
Withdrawals of stock.....	501,357 70
Dividends	36,263 00
Salary of officers and directors.....	16,250 00
Office help, rent, etc.....	24,660 00
Legal services	7,340 00
Withdrawal of "paid-up stock".....	2,300 00
Commission on stock (membership fees).....	22,193 90
General fund account.....	84,256 36
General fund and permanent reserve fund, real estate, expenses.....	7,414 89
Agents' accounts	9,289 83
Sundry accounts	314,830 55
Exchange and transfer of deposits.....	131,147 04
Cash on hand June 30, 1919.....	315,107 97
Total disbursements and cash balance.....	\$2,678,794 81

ASSETS

Cash on hand.....	\$315,107 97
Real estate loans (\$4,020,745.00, less partial payments, \$1,063,895.89) ..	2,956,849 11
Stock loans	65,745 76
Real estate contracts (\$110,681.32, less \$22,368.69).....	88,312 63
Permanent reserve fund contracts.....	88,281 00
Home office building.....	45,000 00
Sundry accounts receivable.....	12,226 07
Advances on account of loans.....	37,634 54
Total assets	\$3,609,157 08

LIABILITIES

Stock—Permanent reserve fund capital stock.....	\$200,000 00
General fund capital stock.....	100,000 00
"Paid-up" or Class "D" stock.....	47,700 00
Installments paid on stock.....	2,474,832 86
Surplus account	99,437 15
Undivided profits (for last six months).....	161,325 76
Extra payments, "F" and "S" stock.....	475,735 68
Sundry accounts (including building under construction).....	50,125 63
Total liabilities	\$3,609,157 08

PACIFIC STATES SAVINGS AND LOAN COMPANY, OF SAN FRANCISCO, CALIFORNIA.

OFFICERS

F. REIS, JR., President.

WILLIAM S. PARDY, Secretary.

OLIVER DIBBLE, Attorney.

DIRECTORS

F. REIS, JR., CHRISTIAN REIS, E. A. STENT, JOHN GARWOOD,
WILLIAM S. PARDY.

Amount of authorized capital.....	\$1,000,000 00
Par value	\$100 00
Number of members and investors.....	1,936
Number of shares sold during the year.....	None
Number of shares cancelled and withdrawn during the year.....	216
Number of shares in force at close of year.....	3,828
Amount of membership fee per share charged.....	\$1 00
Rate of annual dividend declared for year past.....	7%

RECEIPTS

Installments or dues on stock (investment certificates).....	\$271,052 87
Repayments on loans.....	418,918 07
Real estate sold.....	75,066 32
Insurance, taxes and other advances refunded.....	32,874 60
Interest	120,603 82
Rents from real estate.....	9,680 03
Membership fees collected.....	136 00
Bonds	35,002 47
Partial repayment on definite contract loans.....	148,479 45
Profits on sale of real estate.....	11,189 50
Profits on cancelled certificates.....	669 54
Incompleted loans	10,531 62
Matured certificates	1,994 00
Cash on hand December 31, 1917.....	72,048 27
Total receipts and balances.....	\$1,208,816 56

DISBURSEMENTS

Real estate loans.....	\$493,724 90
Stock	6,145 00
Insurance and taxes advanced.....	5,104 46
Withdrawals of stock.....	28,610 23
Dividends	32,641 99
Salary of officers and directors and office help.....	16,478 70
Current expenses, rent, etc.....	9,136 81
Commission on stock (membership fees).....	17 50
Discount	324 23
Investment certificates	200,443 11
Collection fees	2,545 89
Real estate taken on foreclosure.....	85,010 51
Advances	33,998 18
Profit and loss.....	16,051 00
Bonds	65,002 47
Matured deposits	6,034 00
Incompleted loans	32,314 79
Partial repayment on definite contract loans.....	109,108 87
Cash on hand December 31, 1918.....	66,123 92
Total disbursements and cash balance.....	\$1,208,816 56

ASSETS

Cash on hand.....	\$66,123 92
Real estate loans (\$1,578,949.41, less partial payment, \$344,249.78)....	1,234,699 63
Stock loans	5,285 00
Bonds and warrants.....	153,062 50
Real estate owned.....	85,795 89
Advances on account of loans.....	3,765 47
Furniture and fixtures.....	300 00
Arrears	9,079 14
Temporary accounts	1,466 01

Total assets	\$1,559,577 56
Interest due and uncollected.....	4,299 14

LIABILITIES

Stock	\$283,699 10
Investment certificates	1,057,284 63
Contingent fund	167,024 92
Undivided profits	4,299 14
Loans due and incomplete.....	10,531 62
Advance installments certificates.....	7,172 00
Reserved for taxes.....	6,811 64
Reserved for dividends.....	10,000 00
Suspense account certificates.....	5,160 30
Temporary accounts	5,600 21
Matured certificates	1,994 00

Total liabilities	\$1,559,577 56
Interest due and uncollected.....	4,299 14

PROCEEDINGS
OF THE
TWELFTH ANNUAL CONVENTION
OF THE
Washington State League
OF
Local Savings and Loan
Associations

HELD IN THE
CITY OF SEATTLE
Sept. 22-23, 1919

Minutes of the Twelfth Annual Convention of the Washington State League of Building, Savings and Loan Associations, Held in the City of Seattle, Sept. 22 and 23, 1919

The twelfth annual convention of the Washington State League of Local Building, Savings and Loan Associations was called to order by President Adolph F. Linden in the New Washington Hotel, at 10:00 A. M., September 22, 1919.

The delegates were most cordially welcomed to Seattle in a very eloquent address by Senator George B. Lamping. A most pleasing response to the address was given by Judge W. P. Bell, of Everett.

The following committees were then appointed by the chair:

On credentials:

Messrs. F. S. McWilliams, J. L. Cooper, W. P. Bell.

On resolutions:

Messrs. John F. Chesterley, Alfred Lister, W. P. Lathrop.

Auditing:

Messrs. George P. Marshall, E. B. Arthaud, Fred W. Stocking.

On nominating:

Messrs. J. L. Cooper, John F. Chesterley, W. D. Comer.

The report of the Credentials Committee was presented by Chairman McWilliams, showing the following societies to be members of the State League in good standing and entitled to representation in the League meeting:

Cascade Savings and Loan Association, of Everett.
Bellingham Savings and Loan Association, of Bellingham.
Citizens Savings and Loan Society, of Spokane.
Interstate Building, Loan and Trust Association, of Walla Walla.
Mutual Savings and Loan Association, of Seattle.
Olympia Building and Loan Association, of Olympia.
Puget Sound Savings and Loan Association, of Seattle.
Skagit County Savings and Loan Association, of Anacortes.
State Building and Loan Association, of Tacoma.
Fidelity Savings and Loan Association, of Spokane.
Southwest Washington Savings and Loan Association, of Hoquiam.
Tacoma Savings and Loan Association, of Tacoma.
Yakima Savings and Loan Association, of Yakima.
Spokane Savings and Loan Society, of Spokane.
Northwest Building and Loan Association, of Tacoma.

Upon motion, duly seconded, this report was accepted.

The minutes of the meeting of the last convention, held at Olympia on the 29th and 30th of July, 1918, were read and approved.

The President then delivered his annual address, which was listened to with great interest.

The Treasurer, W. D. Comer, presented his annual report, showing a balance of \$74.11.

It was moved, seconded and carried that the following Associations, upon payment of the regular annual dues, be admitted to full membership in the League:

Aberdeen Savings and Loan Association, of Aberdeen.
Security Savings and Loan Association, of Aberdeen.
Liberty Savings and Loan Association, of Yakima.
Seattle Savings and Loan Association, of Seattle.
Home Savings and Loan Association, of Seattle.
Universal Savings and Loan Association, of Seattle.
Ballard Savings and Loan Association, of Ballard.
Trades Union Savings and Loan Association, of Seattle.
Pacific Building and Loan Association, of Tacoma.
Peninsular Savings and Loan Association, of Walla Walla.

The convention then adjourned until 1:30 P. M.

Afternoon Session.

The convention was called to order by President A. F. Linden.

Mr. James L. Cooper, of Spokane, delivered an address in which he gave impressions gained from his visit to the national convention held at Detroit in July of this year. This was followed by Mr. Linden, of Seattle, on the same subject. Both addresses were full of interest and contained many helpful suggestions.

Mr. W. A. Hoage, State Inspector, delivered a most interesting address on the Federal home loan bank plan. This was followed by a lively discussion in which many questions were asked Mr. Hoage. An interesting address was also given by Mr. John F. Chesterley, of Yakima, on "Practical Plan for Development of a New Association." This address aroused deep interest and much discussion. Hon. J. Fred Leghorn, of the State Auditor's office, delivered an intelligent and stirring address, "The Ideal Savings and Loan Association."

The convention adjourned until 10:00 o'clock, Tuesday, September 23.

Morning Session, September 23.

Convention called to order by President A. F. Linden.

Mr. F. S. McWilliams, of Spokane, delivered an able address on "The Relationship of the Association to the Borrower." This proved to be a very interesting subject and developed much discussion.

The Auditing Committee then presented its report, showing \$19.11 carried over from last year, \$7.50 each from fourteen Savings and Loan Associations, making a total amount received by the Treasurer, \$124.11. Amount disbursed by check, \$50, leaving a balance on hand of \$74.11.

W. F. McDowell, J. L. Cooper and William P. Hopping, Committee on Finances, reported as follows:

"Your committee appointed to recommend a system of financing the current expenses of the State League beg to report as follows: That each Association member of the League be assessed for expenses per year at the rate of \$8.00 for every one hundred thousand dollars, or proportionate fraction thereof, of assets as of June 30 of each year. Minimum dues \$10.00.

"That the above assessment constitutes the yearly dues in lieu of the fee of \$7.50 now charged for membership in the League.

"The above assessment is figured on a basis that will provide an expense fund of about \$1000.00 per annum. This will take care of, roughly speaking, the following expenses:

Salary of Secretary at \$25.00 per month.....	\$300 00
Monthly Bulletin, postage, printing, dues to National League and incidentals.....	300 00
Two delegates to national convention.....	400 00

Total.....\$1000 00

"On account of expenses already incurred this arrangement shall be effective as of June 30, 1919, and any dues already paid as of that date shall apply on the entire amount owing from such member associations."

The meeting adjourned until 2:00 P. M.

Tuesday Afternoon, September 23.

The following report was made by the Committee on Resolutions:

"Whereas, The various Savings and Loan Associations which are members of the Washington State League of Building, Savings and Loan Associations have been organized to urge thrift and to encourage saving, and desire at this time to reaffirm our belief in thrift and saving as an asset and resource of the nation and as the duty of every individual to himself, to his family, his community and his country, and

"Whereas, There is now a tremendous demand for new capital to construct homes and to develop industry, and

"Whereas, No better means exists for aiding saving and encouraging thrift and promoting the accumulation of capital among our people than the Savings and Loan Associations of the State of Washington;

"Therefore, Be It Resolved, That each member of this League use every effort to bring to a larger circle the service and use of its privileges and thereby to build up the aggregate assets of the members of this League to more than \$20,000,000.00 during the next year.

"Be It Resolved, That the members of this Association express our sincere appreciation of, and thankfulness for, the courtesy and hospitality shown us by the Seattle Savings and Loan Associations, and our President, Mr. A. F. Linden, for the thoughtfulness in providing for the comfort and enjoyment of this convention.

"Be It Resolved, That the Executive Committee be authorized to admit new Associations to membership in the League as soon as the Committee shall have determined that such new Associations are worthy of membership.

"Be It Further Resolved, That the traveling expenses of two delegates to the convention of the National League of Savings and Loan Associations be paid by the League each year.

"Be It Resolved, That this League pay for its apportioned share of the expenses of the National League each year.

"Be It Resolved, That a committee of five be appointed by the President each year as a Committee on Ethics and that this Committee be authorized to work for uniform methods and practices and to bring to the attention of

the State Auditor any violations of the state law and to pass on the propriety of action in the event that any member desires to submit for its consideration any questions as to courses of conduct or actions in dealing with the public."

The convention was then addressed by Mr. Carl E. Croson, attorney at law, Seattle, on "The Service of the Savings and Loan Association to the Community." Mr. Croson made a very intelligent and interesting address, showing that he had made a thorough study of his subject.

The Committee on Nominations presented the following names for the various officers:

For President—Walter F. McDowell, of Tacoma.

First Vice-President—William P. Hopping, of Tacoma.

Second Vice-President—Judge W. P. Bell, of Everett.

Secretary-Treasurer—A. F. Linden, of Seattle.

Delegates to the National Convention—Walter F. McDowell, of Tacoma; F. S. McWilliams, of Spokane.

Upon motion, duly seconded and carried, the report of the Nominating Committee was unanimously adopted. At this point the new President was called to the chair.

Mr. John F. Chesterley and Mr. Logan H. Roberts, of Yakima, joined in an invitation to the League to meet in their city in the year 1920, and upon motion, duly seconded and carried, the invitation was accepted.

Upon motion, duly seconded and carried, the convention then adjourned sine die.

W. D. COMER, Secretary.

ELECTION OF OFFICERS.

The following officers were elected for the ensuing year:

Walter F. McDowell, President.....	Tacoma
William P. Hopping, First Vice-President.....	Tacoma
Judge W. P. Bell, Second Vice-President.....	Everett
A. F. Linden, Secretary-Treasurer.....	Seattle

ROSTER.

Presidents.

1909-1910	A. B. Weed.....	Yakima
1910-1911	E. D. Olmsted.....	Spokane
1911-1912	Raymond R. Frazier.....	Seattle
1912-1913	Frank A. Chase.....	Spokane
1913-1914	Logan H. Roberts.....	Yakima
1914-1915	R. E. Porterfield.....	Spokane
1915-1916	Alfred Lister	Tacoma
1916-1917	William Thaanum	Seattle
1917-1918	F. S. McWilliams.....	Spokane
1918-1919	A. F. Linden.....	Seattle
1919-1920	Walter F. McDowell.....	Tacoma

Vice-Presidents.

1909-1910	R. Campbell	Seattle
1910-1911	Raymond R. Frazier, First Vice-President.....	Seattle
1910-1911	Alfred Lister, Second Vice-President.....	Tacoma
1911-1912	Alfred Lister, First Vice-President.....	Tacoma
1911-1912	Logan H. Roberts, Second Vice-President.....	Yakima
1912-1913	Logan H. Roberts, First Vice-President.....	Yakima
1912-1913	Dudley Eshelman, Second Vice-President.....	Tacoma
1913-1914	R. E. Porterfield, First Vice-President.....	Spokane
1913-1914	Alfred Lister, Second Vice-President.....	Tacoma
1914-1915	Alfred Lister, First Vice-President.....	Tacoma
1914-1915	W. F. McDowell, Second Vice-President.....	Olympia
1915-1916	William Thaanum, First Vice-President.....	Seattle
1915-1916	W. F. McDowell, Second Vice-President.....	Olympia
1916-1917	F. S. McWilliams, First Vice-President.....	Spokane
1916-1917	Raymond R. Frazier, Second Vice-President.....	Seattle
1917-1918	A. F. Linden, First Vice-President.....	Seattle
1917-1918	W. P. Hopping, Second Vice-President.....	Tacoma
1918-1919	W. F. McDowell, First Vice-President.....	Olympia
1918-1919	W. P. Hopping, Second Vice-President.....	Tacoma
1919-1920	W. P. Hopping, First Vice-President.....	Tacoma
1919-1920	Judge W. P. Bell, Second Vice-President.....	Everett

Treasurers.

1909-1910	H. O. Shuey.....	Seattle
1910-1911	H. O. Shuey.....	Seattle
1911-1912	Frank A. Chase.....	Spokane
1912-1913	Alfred Lister	Tacoma
1913-1914	W. F. McDowell.....	Olympia
1914-1915	Logan H. Roberts.....	Yakima
1915-1916	C. D. Roberts.....	Spokane
1916-1917	C. L. Roberts.....	Yakima
1917-1918	Phil Ditter	Yakima
1918-1919	Phil Ditter	Yakima
1919-1920	A. F. Linden.....	Seattle

Secretaries.

1909-1910	Dudley Eshelman	Tacoma
1910-1911	Dudley Eshelman	Tacoma
1911-1912	Dudley Eshelman	Tacoma
1912-1913	Raymond R. Frazier.....	Seattle
1913-1914	Raymond R. Frazier.....	Seattle
1914-1915	Raymond R. Frazier.....	Seattle
1915-1916	Raymond R. Frazier.....	Seattle
1916-1917	W. F. McDowell.....	Olympia
1917-1918	J. L. Cooper.....	Spokane
1918-1919	William D. Comer.....	Seattle
1919-1920	A. F. Linden.....	Seattle

STATE OF WASHINGTON

Annual Report of Coal Mines

FOR THE

Year Ending December 31, 1917

JAMES BAGLEY,
State Mine Inspector
SEATTLE



Published by Authority

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PERSONNEL OF THE STATE MINE INSPECTION DEPARTMENT

JAMES BAGLEY.....*State Mine Inspector*
SIMON H. ASH.....*Deputy Mine Inspector*

BOARD OF EXAMINERS

B. H. JOHNSTON, *President*.....Centralia
PETER BOOSE Black Diamond
D. R. SWEM.....Tacoma
JAMES BAGLEY, *Secretary*.....Seattle

LETTER OF TRANSMITTAL

**OFFICE OF THE STATE MINE INSPECTOR,
SEATTLE, WASHINGTON.**

To His Excellency Ernest Lister, Governor of Washington.

SIR: In compliance with section 10 of an act relating to and regulating the operations of coal mining, which became effective June 7, 1917, I have the honor to submit herewith the Annual Report of Coal Mines for the year ending December 31st, 1917.

Respectfully submitted,

JAMES BAGLEY,
State Inspector of Coal Mines.

February 26, 1918.

INTRODUCTION AND REVIEW

After a four-year period of depression, due to increased consumption of fuel oil and the use of electricity as power, which in many cases displaced coal, the coal mining industry in the past year showed a marked revival due to the increased industrial activity and the shortage and high price of fuel oil. In the fall of 1917 many predicted a shortage of coal during the present winter but it can be said to the credit of the industry that it has met every demand made upon it. The production for the past year was the largest in the history of the State, 4,002,759 short tons were produced for the year, an increase of 983,159 tons or 24% over the production for the previous year. While all of the coal producing counties show increases, except Whatcom, the greatest increase is shown in King and Kittitas, 849,335 tons of the increase came from the two counties named. The average value at the mine increased from \$2.37 in 1916 to \$2.84 in 1917. Total value at the mine, \$11,356,357.

The coke output of the ovens located at the mines shows a small increase for the year. The production at the mines was 96,427 tons for the year, an increase of 2,705 tons over the previous year. Coke is also manufactured at the plant of the Seattle Lighting Company, located at Seattle, where five by-product ovens are located with an output of 26,345 tons of coke during 1917. The output of this plant has never been considered by this Department in the coke output for the State until this year, but will be included with the output from the mines hereafter. The output for the State, including this plant, is 122,772 tons. Average value per ton at the ovens, \$7.46; total value, \$915,348. Sixty new ovens of the beehive type were built during the past year at the plant of the Wilkeson Coal & Coke Company at Wilkeson. They were operated only a short time during the year. The Carbon Hill Coal Company have 60 ovens under construction at Crocker, a station on the Northern Pacific railroad near Carbonado, which they expect to operate this year.

There were 5,345 persons employed in the industry during the past year, an increase of about 600 over the previous year. The mines were operated an average of 271 days during 1917; a considerable increase over the previous year and one of the best showings the State has yet had.

While the coal production for the past year was the largest in the history of the State it can be materially increased in the future if market conditions demand it. The Pacific Coast Coal Company and Puget Sound Traction, Light & Power Company have been experimenting with powdered coal for the past two years. The Pacific Coast Coal Company is installing equipment to use coal in this form at their boiler plants at the Black Diamond and Coal Creek mines. If it proves the success claimed, it should replace fuel oil in many of the industrial plants on Puget Sound, thereby greatly increasing the demand for Washington coal.

To meet the increased demand for coal, new properties are being developed and old ones reopened. The Northwestern Improvement Company's

No. 8 mine at Roslyn, on which development work was started in 1916, will be a good producer this year. This is one of the most modern mines in the West. This company is also doing development work at the Hiawatha mine, a new opening about one-half mile above Durham on the Northern Pacific railroad. This mine will have a small production this year. The Roslyn Fuel Company is doing considerable prospecting and development work on their property above Beekman and have opened No. 3 mine on the seam underlying the Roslyn. The Cokedale Coal Company is reopening the old Cokedale mine in Skagit county. The railroad is being rebuilt to the mine and this company expects to ship coal the early part of this year. The Issaquah mine, which has been in financial trouble the last few years, was taken over by the Pacific Coast Coal Company on September 1, 1917, and promises to be a steady producer in the future. This company has also reopened the Cannon mine at Franklin. The Richmond Coal Company is developing a new mine near the old Bucoda mine, near the town of that name, in Thurston county, which promises to be a steady shipper this year.

The Washington Colliery Company, Frank Waterhouse, president, has done considerable prospecting on the east side of Lake Washington near the town of New Castle and the development of a new mine will be started in the near future. The Central Coal Company, C. J. Smith, president, will open a new mine on some coal seams underlying the old Ravensdale mine at Ravensdale. Andrew Reynolds has started development work on a new mine on May creek near Coalfield. All three properties are in King county. A new coal field has been discovered on the Mansfield branch of the Great Northern near Wenatchee. A company has been organized and development work will be started early this year on this property.

If the market demands it, the Washington mines can produce five million tons of coal during 1918.

The cost to the consumer of Washington coal has materially increased during the past year. This was caused by a substantial increase in wages to the mine workers and the high cost of material used at the mines.

GOVERNMENT REGULATES THE PRICE OF FUEL.

Under the act of Congress approved August 10, 1917, regarding the food and fuel supply, President Wilson on August 21 issued the following order:

THE WHITE HOUSE,
WASHINGTON, AUGUST 21, 1917.

The following scale of prices is prescribed for bituminous coal at the mine in the several coal-producing districts. It is provisional only. It is subject to reconsideration when the whole method of administering the fuel supplies of the country shall have been satisfactorily organized and put into operation. Subsequent measures will have as their object a fair and equitable control of the distribution of the supply and of the prices not only at the mines but also in the hands of the middlemen and the retailers.

The prices provisionally fixed here are fixed by my authority under the provisions of the recent act of Congress regarding administration of the food supply of the country, which also conferred upon the Executive control of the fuel supply. They are based upon the actual cost of production and are deemed to be not only fair and just but liberal as well. Under them the industry should nowhere lack stimulation.

WOODROW WILSON.

The following prices were fixed for the State of Washington:

<i>Run of Mine.</i>	<i>Prepared Sizes.</i>	<i>Slack or Screenings.</i>
\$3.25	\$3.50	\$3.00

Prices F. O. B. mine ton of 2,000 lbs.

August 23, 1917, H. A. Garfield was appointed United States Fuel Administrator by the President. The coal operators of King and Pierce counties, through a committee appointed by them, called on the Fuel Administrator at Washington, D. C., with information to show that the price fixed was not fair to the operators of the two counties named. On the showing made the price on prepared sizes was raised from \$3.50 to \$4.50 in King and Pierce counties. This price became effective on October 1. On September 28, 1917, David Whitcomb of Seattle was appointed State Fuel Administrator for Washington. Soon after his appointment, Mr. Whitcomb selected a board of three members to make an investigation into the prices and classification of Washington coal and to make any recommendations that may seem necessary. He appointed as members of the board, Mack F. Gose, chairman, Pomeroy; Raymond R. Fraizer, Seattle, and Raymond P. Tarr, Tacoma. This board held hearings at Seattle in the months of November and December. Their recommendations were submitted to the State Fuel Administrator who forwarded them to the United States Fuel Administrator at Washington, D. C. The recommendations have not been made public to date. About the time this board was appointed a new wage scale was fixed by the eastern operators and representatives of the miners at a conference held at Washington, D. C., with the understanding that the Fuel Administrator would allow prices to be advanced to meet the increase granted the miners. This wage increase was asked for and granted by the Washington operators with the same understanding and went into effect on November 16, 1917. The prices at the mine were advanced on that date as follows:

	<i>Run of Mine.</i>	<i>Prepared Sizes.</i>	<i>Slack or Screenings.</i>
King and Pierce counties.....	\$3.70	\$4.95	\$3.45
Kittitas county	3.55	3.80	3.30
Other counties	3.70	3.95	3.45

Why is the price of coal in this State higher than in the eastern states, is a question often asked this Department. In answering this, many things must be considered. The production of coal per man employed in Washington is lower than in many of the eastern states. There has always been a differential in wages in favor of the Washington miner. The cost of supplies used at the mines is much higher than in the east on account of the distance from the industrial centers. Many folds and faults are encountered in the coal measures in most parts of the State which add greatly to the cost of mining. In addition, the seams in many parts of the state are heavily inclined, making it impossible to separate the slate, bone or refuse in the mine. This is done at the cleaning plant on the outside of the mine. The percentage of waste at the mines in King and Pierce counties runs from 20% to 50% of the output. The foregoing causes, with the high cost of transportation and delivery cost, are the main reasons for the high cost to the consumer of Washington coal.

FATAL ACCIDENTS.

Thirty persons lost their lives in or around the mines in the past year. Pierce county leads in the number of fatalities with nineteen; Kittitas county, seven, and King county, four. The most serious accident of the year occurred at the Wilkeson mine on the night of December 17th, when six men were killed by a rush of water, clay and gravel in the pillar workings in South No. 3 seam. While some of the fatal accidents could be classed as unavoidable, a great many of them were caused by either carelessness on the part of the deceased or failure of the mine officials to enforce the rules and regulations for safety. Attention has been called many times by the inspectors to the importance of enforcing the observance of the rules for safety. On investigating accidents it is often observed that a violation of the rules was the cause of the accident. In many cases it was found that this violation of the rules had been going on for some time with no attempt by the mine officials to stop it. Where the foregoing conditions exist it is noticed that the accident rate is much higher than at other mines in the same field where discipline is maintained. The mine foreman or superintendent who commands the respect of his men is generally the one who enforces the regulations for safety and, if judgment is used, he can get the cooperation of those who work under him. The assistance of both mine officials and mine employes in and around the mines is asked in an effort to reduce the accident rate.

NON-FATAL ACCIDENTS.

There were 916 non-fatal accidents in 1917, as compared with 1,035 in 1916. This shows a small decrease. Owing to the fact that this data was collected under practically the same conditions, it would indicate that men receiving trivial injuries are not staying away from work, and that safety precautions are being more rigidly enforced by the coal operators. The largest number of accidents occur as usual at the working face and are due to falls of coal and rock. Of the 916 accidents 288, or 31%, were due to this cause. In 1916 they constituted 27% of the total. The largest increase of the two was due to falls of coal at the face, which would indicate that more care should be exercised while mining at the face. There were 157 accidents, or 17%, due to mine cars alone. This is also an increase of 3% over 1916 from this cause. About 20% of the accidents in 1917 can be assigned to the haulage which is about 3% greater than in 1916. There were 20 accidents in 1917 due to gas explosions as compared with 28 in 1916. The average time loss due to this cause was 17.92 days per accident, and they form 2.18% of the total. Although there was a decrease from this cause, there is no reason excepting carelessness that causes them, and where they have occurred the mines, in two instances, were on safety lamps, and the gas was ignited by careless shot-firers who neglected to test for gas and lighted the gas when the shots were fired. Several of the other mines were put on safety lamps after the accidents occurred.

A decrease occurred in injuries to the eyes due to flying coal. A more general use of eye screens would cut these down materially. Accidents due to timber also decreased. The percentage of accidents due to machinery show an increase. There were five accidents due to being struck by shots.

These are accidents that are to be strictly guarded against owing to their usual fatal consequences and would not occur if the mining law governing miss-shots and warning required before blasting were strictly carried out.

The percentage of accidents inside and outside remained practically the same as compared with 1916. Small decreases occurred from the other various causes. For a more detailed comparison and information which I hope will help to eliminate the non-fatal accidents, I wish to call your attention to the tables covering these statistics and which appear elsewhere in this report.

The time loss given for the injured who have returned to work is the actual time loss due to the injuries. The new Industrial Insurance regulations, which went into effect on July 1, 1917, provide a waiting period of 7 days. If the time loss of the person is less than 7 days, no compensation is paid, and the accident not listed. If the time loss exceeds 7 days, compensation is paid for all days exceeding 7 up to 30 days. If the time loss exceeds 30 days, compensation for the total time loss is given. Prior to July 1, the accidents listed are for periods of 2½ days and over. The accidents of which the time loss was less than 7 days is therefore not included in the total since July 1, and the time loss given is for the actual time loss due to the injury and not that for which compensation was paid. Compensation as reported to us was paid for 15,406 days during 1917 to those returned to work. Of the 778 returned to work 110 were for periods over 30 days, with a time loss of 7,953 days, and 668 were for periods under 30 days, with a time loss of 8,853 days, making a total time loss of 16,806 days. Most of the accidents happened to miners, and it is expected that the new law, in providing that an inspection of the working faces by the mine foreman or his assistant, will in time eliminate many of the accidents that happen to this class of workmen.

LABOR CONDITIONS.

On September 1, 1916, an agreement was entered into between the Washington Coal Operators and District No. 10, United Mine Workers of America, regarding wages and mining conditions which was to have been in effect until August 31, 1918. However, owing to the increased cost of living the miners' representatives asked for and were granted an increase in wages of 54 cents per day to miners, timbermen and tracklayers; 50 cents per day to all other company men; 12% increase on all yardage and car rates on the west side of the Cascades and 10 cents per ton increase in the Roslyn-Cle Elum field. This increase went into effect on the first day of June, 1917. Following the increases granted throughout the eastern states November 1, 1917, the miners and operators again met in conference. A further increase was granted giving a flat increase of \$1.40 per day to all day men, 12½ cents per ton increase in the Roslyn-Cle Elum field, 15% increase on all yardage car rates and dead work. This increase took effect on November 16, 1917. The two increases granted during the year amount to from \$1.90 to \$1.94 per day on all day work in and around the mines and a proportional increase on all contract work. The wage scale paid in the Washington mines has always been as high and in many cases higher than that paid in other parts of the United States and with the two increases granted in the past year still maintains that standard, as shown by the following wage scale:

INSIDE MINES.

Miners	\$5 89
Timbermen	5 89
Timbermen's helpers	5 20
Tracklayers	5 89
Tracklayers' helpers	5 20
Motormen	5 40
Drivers	5 40
Parting boys	3 50
Parting boys	4 00
Greasers	3 45
Trappers	3 20
Rope riders	5 40
Locomotive engineers	5 40
Hoistmen on development work	5 20
Cagers	5 40
Cagers' helpers	5 20
Pumpmen	5 20
Inside labor not specified	5 20
Boys working on hoists except on main slopes and auxiliary slopes.	4 10

OUTSIDE MINES.

Main hoisting engineers	\$5 65
Power plant engineers	5 50
Compressor engineers	5 45
Development engineers	5 15

Electricians—

First class in and around mine...	\$5 70
Second class in and around mine.	5 40
Machinists—	
First class in and around mine...	5 70
Second class in and around mine.	5 40
Electricians' and machinists' helpers	
in and around mine	4 90
Firemen	5 05
Cagers	5 15
Cagers' helpers	4 75
Teamsters	4 90
Greasers	3 05
Couplers	3 20
Dumper, cross-over	4 75
Blacksmiths—First	5 70
Second	5 40
Blacksmiths' helpers	4 90
Carpenters—First	5 70
Second	5 20
Car repairers	4 90
Choppers	4 90
Screeners (men)	4 40
Screeners (boys)	3 40
Moving picking table (men)	4 40
Moving picking table (boys)	3 40
Outside labor	4 65

The only labor trouble of any consequence at any of the mines in the past year was the strike at the mines of the Carbon Hill Coal Company at Carbonado in the month of April. This was caused by the men at one of the mines protesting the action of the mine foreman and refusing to continue work until he was discharged. A general strike was called at all the mines by the local officials of the miners' union. After about one month's idleness the mines resumed operation under an agreement that both the mine foreman, president and secretary of the local union be suspended pending a final decision by a board composed of operators and miners. The final decision of the board was that all three be discharged. Two other strikes occurred during the year at the Sheldon and Agnew Fuel Company mines which were settled with very little loss of time. On a whole the relations between the mine operators and employes have been good, most of the disagreements at the mines are settled by a conciliation board composed of both operators and miners.

MINING LAWS.

The new mining code passed at the last session of the legislature went into effect on June 7, 1917. This legislation was made possible by the inspection department securing the cooperation of both operators and miners in having the code passed. There are many good features in the code which add to the safety of life and property, and while a few minor changes will have to be made, there is no doubt that if its provisions are followed will do much good in eliminating serious accidents in the coal mines of this State. The following were appointed by the Governor as members of the examining board provided for in the new code: B. H. Johnston, mine operator, Centralia; D. R. Swem, mining engineer, Tacoma; Peter Boos, miner, Black Diamond. They, with the Mine Inspector, who is also a member of the board, while holding examinations for first and second class certificates, held examinations in different parts of the State during the last half of the year. Sixty persons were examined for first class certificates and 43 for second class. A list of those who were certified is given in another part of the report. The certificates of a few in the list have not been sent out on account of their not having finished the first aid training required by law.

RECOMMENDATIONS.

I recommend the following changes be made in the mining laws. Section 46 provides that a pillar at least 75 feet in thickness be maintained between the main slope and airway. I recommend that this be changed to 50 feet, which is more practical where cross cuts have to be driven. Section 47 provides for a pillar of 250 feet on both sides of the slope in which nothing must be driven but the airway. This should be changed so as to give the Mine Inspector permission to cut this distance to 150 feet where he thinks the conditions will permit it. That provision be made in the law to allow the operator, if he wishes, to take powder into the mine in quantities, not to exceed that used in one day, to be distributed to the workmen at or near their working places. This will eliminate in many cases the carrying of powder on man trips on slopes. I also recommend that provision be made by the next legislature for clerk hire for the Mine Inspector. At present the inspectors have to do practically all clerical work of the office, which takes time that should be given to inspection work.

MINE RESCUE AND FIRST AID TRAINING.

The United States Bureau of Mines through their representatives at the Mine Rescue Station, located at the University of Washington, Seattle, has done excellent work in giving training in mine rescue and first aid work during the past year. The new mining code requires all coal mines, where over twenty men are employed, to maintain mine rescue equipment at the mines. At all mines first aid supplies must be furnished. It can be said to the credit of many of the operators that this equipment was maintained at many of the mines before the law compelled them to have it.

NEW MINES, OLD MINES REOPENED, MINES ABANDONED, TEMPORARILY CLOSED OR NOT HEARD FROM SINCE LAST REPORT, 1917.

Black River Coal Company now reporting. National Coal Company opened No. 6 mine and closed No. 1 and No. 3 mines. John McQuade opened Prospect and later abandoned same. Denny-Renton Clay & Coal Company abandoned No. 2 mine and reopened shaft. Pacific Coast Coal Company reopened the Cannon mine, Franklin, and permanently abandoned No. 14 mine. Roslyn Fuel Company has opened a new mine, No. 3, on a seam of coal probably underlying the Roslyn bed. Northwestern Improvement Company has a new mine, No. 7 extension, on the Roslyn bed. Carbon Hill Coal Company worked a new mine at Melmont, opened a new slope on No. 10 (old No. 5) bed, and abandoned old No. 6 mine at Carbonado. Washington Manganese Coal & Copper Company did not operate the old Montezuma (Marcy) mine during the year. South Willis Coal Company abandoned the Wellington mine but opened three new mines on the south side of South Prairie creek on 7, 8 and 10 seams. Bucoda Coal Company's mine reopened by Richmond Coal Company. The Cokedale mine last worked in 1904 has been reopened by Cokedale Coal Company.

The following companies have changed names: Issaquah & Superior Coal Mining Company to Pacific Coast Coal Company; Puget Sound Traction, Light & Power Company to Pacific Coast Coal Company; T. B. Wright & Sons to Roslyn Fuel Company; Monarch Coal Company to Agnew Fuel Company; Freeburn Coal Company to Olympia Coal Mining Company; Bucoda Coal Company to Richmond Coal Company.

STATISTICS.

The unit of weight used in this report is the avoirdupois short ton (2,000 pounds) and is used throughout and is meant when the word tons is used, with the exception of the data on imports and exports as reported by the collector of customs, port warden of Seattle, and harbor master of Tacoma, when the long ton (2,240 pounds) is used. The total tonnages given as the quantity of coal produced or total output at the individual mines represents only the usable fuel. Refuse, slate and bone brought out of the mine or picked or sorted from the coal in the tippie and refuse from washeries and dry cleaning plants are not considered as part of the quantity of coal produced. The total value of the coal is the sum of all the values reported by the individual operators, and the average value for the county or state as the case may be is the total divided by the total tons.

The monthly schedules sent out by this Department to the operators, request that the report of tonnages be given in short tons and segregated as follows: Tons of coal shipped, this should include all coal loaded at the mines for shipment and consumed elsewhere; sold to employes and local trade, this should include wagon trade; coal used by employes, coal loaded directly from the tippie into engine tenders, and that part of the product used in the immediate vicinity of the mines by such industries as brick and sewer pipe plants, local power plants and other local industries; used for power, this should represent all of the coal used to generate steam and heat for the operation of the mine and should include sludge and all the mine product used for that purpose; charged into ovens for coke, this is all coal made into coke at the mines whether mined at the mine where the ovens are located or shipped from some other source. The total tonnage is explained above and is the total of the above headings.

The schedules also request that the number of full days each mine was operated be given, and also the number of 8-hour shifts (men-days) worked inside and the number of men-days worked outside be given, exclusive of the shifts worked by office workers. The average number of employes is then found by dividing the men-days by the full days worked.

In compiling the statistics for the year, the number of the full days worked at each mine is obtained directly by adding the monthly statement of days. The average number of men employed inside, outside and as a total is found by dividing the total number of days for the year into the total shifts inside, outside and total as the case may be. The sum of the men-days or shifts for all mines is divided by the total number of employes thus obtained to ascertain the number of 8-hour days the total number of men were at work in the county or state as the case may be. It is thus shown that instead of having some of the men working on different 8-hour periods during a full day, they are all considered as working on the same 8-hour day. The daily output per employe is found by dividing the total output by the total men-days worked. In some instances, where no record was kept of the men-days worked but the number of employes were given, the shifts were obtained by multiplying the full days worked, as reported, by the number of men employed in the 24-hour day.

In giving the total value of the production at the close of the year, it should be understood that the total value given is the total selling value at the mine for the entire output and should represent returns to the operators

for coal sold plus estimated value of that not sold, such as all the product used for power, etc.

The yearly schedules sent to the operators request the tonnage of coal washed; it should be understood that this means the tonnage that comes out of the mine and not the cleaned product. The tonnage of refuse requested is the difference between the coal mined and the cleaned product. As stated before the cleaned product is the tonnage considered in arriving at the total production.

Several errors appearing in the seventeenth biennial report have been corrected for statistics again appearing in this report. An error in the number of fatal accidents inside during 1916 has been corrected in this report.

SUMMARY.

The following summary for the years ending December 31, 1916 and 1917 is here presented:

SUMMARY	1916	1917
Number of counties producing coal.....	6	7
Number of mines and openings of all kinds.....	55	68
New or old mines reopened or again reporting during the year.....	8	13
Mines closed, abandoned, or not heard from since last report.....	11	5
Total production of coal (short tons).....	8,019,600	4,002,759
Total value of coal at mine.....	\$7,155,317	\$11,356,357
Average value of coal at mine, per short ton.....	\$2.37	\$2.84
Total production of coke at mines, short tons.....	96,722	96,427
Total production of by-product coke*.....		26,345
Total production of coke.....	96,722	122,772
Total value of coke.....	\$467,210	\$615,348
Average value of coke, per short ton.....	\$5.20	\$7.46
Total number of inside employees at mines.....	3,598	4,058
Total number of outside employees at mines, including coke workers.....	1,150	1,297
Total number of employees at mines.....	4,748	5,345
Average number of days operated.....	213	271
Yearly production per employee (short tons).....	638	749
Daily average short tons per employee.....	2.91	2.76
Number of men accidentally killed, inside.....	19	27
Number of men accidentally killed, outside.....	2	8
Total number of men accidentally killed.....	21	35
Number of widows.....	15	15
Number of orphans.....	46	50
Number of tons mined to each life lost.....	143,790	133,425
Number of lives lost per 1,000 employees, inside.....	5.28	6.66
Number of lives lost per 1,000 employees, inside and outside.....	4.42	5.61
Number of non-fatal accidents, inside.....	917	822
Number of non-fatal accidents, outside.....	118	94
Total number of non-fatal accidents.....	1,035	916
Number of tons mined per non-fatal accident, inside.....	3,293	4,370
Number of tons mined per non-fatal accident, outside.....	25,590	42,583
Number of tons mined per non-fatal accident, inside and outside.....	2,918	4,370
Number of non-fatal accidents per 1,000 employees, inside.....	255.0	202.5
Number of non-fatal accidents per 1,000 employees, outside.....	102.6	73.0
Non-fatal accidents per 1,000 employees, inside and outside.....	218.1	171.3
Number of injured returned to work, inside and outside.....	874	778
Time loss of injured returned to work.....	20,274	16,306
Average time loss of injured returned to work.....	23.19	21.60

PRODUCTION OF COKE BY COUNTIES.

COUNTY	1916	1917
Pierce	96,722	96,427
King		26,345

* No record of by-product coke was obtained in 1916.

PRODUCTION OF COAL BY COUNTIES, 1916.

COUNTY	Tons of Coal Shipped	Sold to Local Trade	Used for Power	Charged Into Coke Ovens	Total Coal Production	Total Value	Average Value Per Ton at Mine	Average Number of Days Operated	Average Number of Employees
King	807,076	10,982	65,397	.....	828,275	\$2,256,583	\$2.54	195	1,765
Kititas	1,251,623	20,070	45,295	.....	1,316,988	3,064,276	2.33	224	1,513
Lewis	89,215	14,323	5,181	.....	109,121	1,195,285	1.70	197	147
Pierce	876,354	4,006	8,959	* 130,674	888,162	1,367,316	2.56	251	1,179
Thurston	159,740	1,080	4,246	.....	166,066	271,867	1.60	199	128
Whatcom	5,986	.....	.....	.....	6,983	.....	.....	289	14
The State	2,689,996	57,013	129,848	* 130,674	3,010,000	\$7,155,317	\$2.37	218	4,746

* 7,431 tons purchased and charged into coke ovens at Fairfax. This coal is included in coal shipped from the other mines.

PRODUCTION OF COAL BY COUNTIES, 1917.

COUNTY	Tons of Coal Shipped	Sold to Local Trade	Used for Power	Charged Into Coke Ovens	Total Coal Production	Total Value	Average Value Per Ton at Mine	Average Number of Days Operated	Average Number of Employees
King	1,221,629	23,674	69,093	† 45,025	1,314,396	\$3,949,527	\$3.00	246	2,040
Kititas	1,463,201	19,499	58,137	.....	1,741,237	4,545,990	2.61	299	1,631
Lewis	108,642	17,049	6,387	.....	130,078	366,037	2.81	238	1,180
Pierce	427,668	4,474	14,778	* 161,748	600,049	2,154,862	3.56	267	1,302
Skagit	.....	1,000	.....	.....	1,000	.....	.....	196	25
Thurston	189,200	1,270	4,218	.....	204,688	339,241	1.61	234	167
Whatcom	4,541	.....	.....	.....	4,841	.....	.....	257	10
The State	3,623,196	67,016	158,433	† 206,773	4,002,759	\$11,856,897	\$2.94	271	5,845

* 2,634 tons purchased and charged into coke ovens at Fairfax. This coal is included in coal shipped from the other mines.

† 45,025 tons purchased and charged into coke ovens at Seattle. This coal is included in coal shipped from the other mines.

‡ 47,689 tons purchased and charged into coke ovens at Seattle and Fairfax. This coal is included in coal shipped from the other mines.

COAL PRODUCTION BY COUNTIES FOR EACH MONTH, 1917.

MONTH	KING		KITITAS		LEWIS		PIERCE		SKAGIT		THURSTON		WHATCOM		THE STATE			
	Pro-duction		Pro-duction		Pro-duction		Pro-duction		Pro-duction		Pro-duction		Pro-duction		Pro-duction	Employees* (Average)	Days Worked	Men-Days
January	115,188		149,222		14,968		56,293		.....		16,799		342		392,782	5,123.6	24.8	127,410
February	106,472		183,212		7,970		54,902		.....		10,461		382		312,419	4,883.7	21.7	106,275
March	106,860		183,862		8,004		53,394		.....		14,466		466		319,861	4,897.4	22.7	109,337
April	98,062		139,863		7,630		36,213		.....		15,204		324		279,276	4,554.0	20.9	96,491
May	98,600		138,600		5,403		38,070		.....		16,666		602		297,860	4,597.5	24.2	110,518
June	98,368		140,680		7,192		44,928		.....		19,398		371		310,707	4,734.0	24.3	115,318
July	100,079		148,786		9,312		52,571		.....		17,663		364		323,749	5,010.9	24.1	121,022
August	115,896		162,266		9,866		68,748		.....		14,694		491		361,962	5,314.7	25.4	135,548
September	116,162		141,866		11,474		51,359		.....		12,470		364		383,974	5,440.6	23.0	125,688
October	127,794		156,062		16,069		55,231		.....		20,668		482		376,375	6,625.6	24.9	137,688
November	128,065		165,061		18,063		59,853		.....		21,928		343		398,273	5,971.5	23.5	140,924
December	110,617		149,670		14,644		44,142		1,000		24,353		440		344,896	6,063.9	20.5	124,141
The Year.....	1,314,366		1,741,237		130,573		606,049		1,000		204,688		4,841		4,002,769	5,846	271	1,448,253

* The average number of employees is the sum of the average number of men employed at each mine during the month or the year, as the case may be, and the days worked is the average number of days that these employees were at work during the month or year.

TABLE SHOWING AVERAGE DAYS WORKED, NUMBER OF MEN EMPLOYED, AND DAILY OUTPUT IN SHORT TONS PER EMPLOYEE, BY COUNTIES, FOR THE YEARS 1908-1917.

YEAR	KING COUNTY			KITTITAS COUNTY			CLALLAM COUNTY			LEWIS COUNTY			PIERCE COUNTY		
	Average Days Worked	Average Number of Men	Daily Output Per Man	Average Days Worked	Average Number of Men	Daily Output Per Man	Average Days Worked	Average Number of Men	Daily Output Per Man	Average Days Worked	Average Number of Men	Daily Output Per Man	Average Days Worked	Average Number of Men	Daily Output Per Man
1908.....	223	1,663	2.47	191	2,127	8.48	290	19	0.54	169	173	1.99	294	1,235	1.69
1909.....	273	1,763	2.51	205	2,222	8.40	306	32	0.23	242	205	2.04	293	1,362	1.69
1910.....	270	2,023	2.80	243	2,195	8.13	77	7	1.20	235	261	2.58	292	1,554	1.73
1911.....	282	1,900	2.89	189	1,987	8.33	.....	.....	.....	212	273	2.74	278	1,497	1.91
1912.....	229	2,025	2.76	202	1,745	8.50	.....	.....	.....	184	290	2.49	266	1,484	2.16
1913.....	260	2,417	2.16	229	1,864	8.67	.....	.....	.....	190	290	2.82	276	1,565	1.90
1914.....	187	2,366	2.36	169	1,663	8.76	.....	.....	.....	115	290	3.46	232	1,240	1.78
1915.....	155	1,869	2.91	127	1,634	4.51	.....	.....	.....	135	153	3.16	235	1,179	1.77
1916.....	166	1,765	2.50	234	1,513	3.86	.....	.....	.....	137	147	3.89	251	1,179	1.80
1917.....	260	2,040	2.42	239	1,681	3.69	.....	.....	.....	238	180	3.12	267	1,802	1.74

TABLE SHOWING AVERAGE DAYS WORKED, NUMBER OF MEN EMPLOYED, AND DAILY OUTPUT IN SHORT TONS PER EMPLOYEE, BY COUNTIES, FOR THE YEARS 1906-1917.—Concluded.

YEAR	SEAGIT COUNTY			THURSTON COUNTY			WHATCOM COUNTY			THE STATE		
	Average Days Worked	Average Number of Men	Daily Output Per Man	Average Days Worked	Average Number of Men	Daily Output Per Man	Average Days Worked	Average Number of Men	Daily Output Per Man	Average Days Worked	Average Number of Men	Daily Output Per Man
1906.....	198	25	0.20	109	74	1.98	317	50	1.90	218	5,341	2.56
1907.....	199	142	132	142	132	4.85	272	34	1.86	247	5,725	2.54
1908.....	190	163	47	163	47	3.91	323	29	1.82	234	6,121	2.46
1909.....	191	186	109	186	109	4.39	311	15	0.76	234	5,781	2.62
1910.....	192	230	168	230	168	3.69	293	20	1.24	225	5,673	2.62
1911.....	193	203	172	203	172	4.39	298	15	1.63	251	6,066	2.62
1912.....	194	153	130	153	130	5.64	285	18	1.29	300	6,647	2.69
1913.....	195	189	128	189	128	6.43	222	19	1.43	166	4,859	3.01
1914.....	196	189	128	189	128	6.43	229	14	1.43	218	4,746	2.91
1915.....	197	234	157	234	157	5.59	287	10	1.73	271	5,345	2.76
1916.....												
1917.....												

PRODUCTION OF COAL IN WASHINGTON, 1910-1917, BY COUNTIES, IN SHORT TONS.

COUNTY	1910	1911	1912	1913	1914	1915	1916	1917	Increase or Decrease, 1917
Challam	666	1,241,553	1,050,953	1,359,274	1,042,607	844,966	889,276	1,314,896	+426,091
King	1,311,870	1,354,845	1,236,690	1,330,596	1,237,694	879,082	1,316,993	1,741,237	+424,244
Kittitas	1,697,458	1,721,219	1,481,992	1,481,992	871,559	78,259	109,121	130,578	+21,487
Lewis	172,219	158,801	127,982	148,592	556,841	486,698	563,162	606,049	+72,887
Pierce	784,961	786,768	789,820	882,272	556,841	486,698	563,162	1,000	+1,000
Skagit	29,965	98,949	136,478	153,568	112,189	112,096	165,099	204,668	+89,622
Thurston	12,415	3,476	6,523	7,325	6,602	6,255	5,988	4,841	-1,142
Whatcom									
Totals	3,979,599	3,548,322	3,346,949	3,831,647	3,040,361	2,409,331	3,019,600	4,002,769	+983,159
Total value	\$10,296,400	\$8,597,384	\$9,122,572	\$9,995,392	\$7,142,084	\$6,368,824	\$7,165,317	\$11,360,897	+\$4,201,040

PRODUCTION OF COAL IN WASHINGTON, 1800-1917, IN SHORT TONS.*

Year	Quantity	Year	Quantity	Year	Quantity	Year	Quantity	Year	Quantity	Year	Quantity
1800.....	5,874	1870.....	17,844	1880.....	145,015	1890.....	1,263,669	1900.....	2,418,084	1910.....	3,979,589
1801.....	6,000	1871.....	50,000	1881.....	109,000	1891.....	1,064,249	1901.....	2,466,190	1911.....	3,548,322
1802.....	7,000	1872.....	23,000	1882.....	177,840	1892.....	1,140,575	1902.....	2,600,789	1912.....	3,246,946
1803.....	8,000	1873.....	25,000	1883.....	244,900	1893.....	1,908,860	1903.....	2,800,468	1913.....	3,831,647
1804.....	10,000	1874.....	80,332	1884.....	165,066	1894.....	1,181,680	1904.....	2,898,686	1914.....	3,040,381
1805.....	12,000	1875.....	99,569	1885.....	360,250	1895.....	1,163,737	1905.....	2,866,901	1915.....	2,409,351
1806.....	13,000	1876.....	110,242	1886.....	423,523	1896.....	1,262,182	1906.....	3,280,823	1916.....	3,019,600
1807.....	13,000	1877.....	120,846	1887.....	772,501	1897.....	1,480,182	1907.....	3,722,433	1917.....	4,002,759
1808.....	14,500	1878.....	131,660	1888.....	1,215,760	1898.....	1,775,257	1908.....	2,977,490	Total..	76,248,373
1809.....	15,000	1879.....	142,666	1889.....	1,080,578	1899.....	1,917,607	1909.....	3,660,689		

* From Mine Inspectors' Reports 1800-1897, inclusive, are taken from U. S. G. S. Reports.

SUMMARY FOR THE YEARS 1900-1917.

YEAR	Total Coal Production In Short Tons	Total Value at Mine	Average Value Per Ton at Mine	Total Coke Production In Short Tons*	Total Value of Coke*	Average Value of Coke Per Ton	Total Number of Inside Employees	Total Number of Outside Employees	Total Number of Employees	Average Tons Per Man Per Year
1900.....	2,418,084	\$4,425,002	\$1.83	35,921	\$176,012	\$4.90	3,447	791	4,238	570
1901.....	2,466,190	4,538,394	1.97	49,197	245,985	5.00	3,945	881	4,826	511
1902.....	2,600,789	5,300,854	2.04	60,569	292,845	5.00	3,515	859	4,344	519
1903.....	2,800,468	6,180,389	2.20	47,916	239,590	5.00	3,089	940	4,079	474
1904.....	2,898,686	5,697,402	1.97	46,175	230,875	5.00	3,748	885	4,633	447
1905.....	2,866,901	5,779,209	2.02	50,972	242,117	4.75	4,060	868	4,928	572
1906.....	3,280,823	6,021,157	1.83	44,944	215,731	4.80	3,929	1,298	5,227	680
1907.....	3,722,433	7,709,830	2.07	49,798	308,230	6.19	4,855	1,398	6,113	699
1908.....	3,660,689	6,054,002	1.65	37,831	205,596	5.50	4,270	1,071	5,341	587
1909.....	3,979,689	9,295,985	2.33	42,836	232,937	5.50	4,490	1,305	5,795	627
1910.....	3,546,946	10,295,400	2.90	58,715	338,938	5.81	4,688	1,438	6,121	650
1911.....	3,040,381	8,167,884	2.68	48,880	238,948	5.54	4,393	1,333	5,731	613
1912.....	3,546,946	8,122,072	2.30	73,782	370,769	5.02	4,711	1,331	6,073	680
1913.....	3,831,647	9,965,862	2.60	73,782	405,682	5.52	4,838	1,364	6,247	682
1914.....	2,409,351	7,142,084	2.95	73,782	471,762	6.39	3,653	1,254	4,947	556
1915.....	2,409,351	5,985,324	2.44	68,686	471,762	6.88	3,653	1,145	4,823	498
1916.....	3,019,600	7,156,317	2.37	86,722	487,210	5.61	3,990	1,160	5,146	746
1917.....	4,002,759	11,866,867	2.96	122,772	615,345	7.46	4,038	1,287	5,346	769

* Prior to 1917 the total production and value of coke is given for the coke made at the mines only.

SUMMARY FOR THE YEARS 1900-1917.—Concluded.

YEAR	Average Daily Output Per Man	Number of Days Worked (Average)	Number of Fatal Accidents	Number of Non-Fatal Accidents	Number of Widows	Number of Orphans	Death Rate Per 1,000 Employees	Non-Fatal Accidents Per 1,000 Employees	Tons Mined Per Life Lost	Tons Mined Per Non-Fatal Accident
1900.....	.....	.....	38	78	16	88	7.79	18.4	73,373	31,000
1901.....	.....	.....	27	82	4	11	5.59	18.9	91,340	30,075
1902.....	.....	.....	34	54	12	25	7.32	12.4	79,141	49,929
1903.....	.....	.....	25	88	9	30	6.13	13.1	131,618	39,644
1904.....	.....	.....	31	54	14	27	6.09	11.6	98,731	55,580
1905.....	2.43	236	13	90	7	17	2.61	18.1	218,938	31,682
1906.....	2.45	257	22	76	7	5	4.21	14.5	149,589	43,298
1907.....	2.26	270	37	98	15	34	6.05	16.0	100,668	37,984
1908.....	2.56	218	25	79	7	19	4.68	14.7	119,089	37,689
1909.....	2.54	247	39	135	22	61	6.81	23.8	92,007	39,801
1910.....	2.46	264	43	108	18	23	7.08	17.6	92,548	36,847
1911.....	2.62	234	27	115	14	43	4.07	19.7	131,419	30,855
1912.....	2.52	225	14	455	7	19	2.46	80.2	239,068	7,355
1913.....	2.52	251	22	773	8	13	3.62	127.4	174,166	4,966
1914.....	2.69	200	17	831	9	29	3.01	147.4	178,845	3,659
1915.....	3.01	165	45	703	28	59	9.32	146.2	58,540	3,413
1916.....	2.91	218	21	1,085	15	46	4.42	218.1	143,790	2,918
1917.....	2.76	271	30	916	15	50	5.61	171.3	133,455	4,370

TABLE SHOWING LOCATION, NUMBER, TYPE OF OVEN AND COKE PRODUCTION FOR THE YEAR 1917.

NAME OF COMPANY	Location of Ovens	NUMBER OF OVENS		Number of Tons of Coal Made Into Coke	Tons of Coke Produced
		Beehive	By- Product		
Carbon Hill Coal Company.....	Carbonado.....	71	.....	35,317	19,611
Fairfax Mine Incorporated.....	Fairfax.....	60	.....	34,482	21,345
Washington Manganese Coal & Copper Company*.....	Fairfax.....	28	.....	.....	.....
Wilkeson Coal & Coke Company.....	Wilkeson.....	25	.....	91,949	55,471
.....	{ S. Wilkeson.....	100	.....	.....	.....
.....	{ Wilkeson.....	.....	.....	.....	.....
Seattle Lighting Company.....	Seattle.....	.....	5 Klonne	45,025	26,345
Totals.....	.....	341	5	206,773	122,772

* Not in operation during the year.

TABLE SHOWING PRODUCTIONS AND PERCENTAGES OF COAL MINED BY MACHINE, HAND AND SHOT OFF SOLID, AND TONNAGES OF COAL WASHED, CLEANED COAL, REFUSE AND PERCENTAGE OF CLEANED COAL TO TOTAL OUTPUT, BY COUNTIES, 1917.

NAME OF COUNTY	MINED BY MACHINE		MINED BY HAND		SHOT OFF SOLID		Total Production	Material Washed or Washed (Tons)	Cleaned Coal (Tons)	Refuse (Tons)	Percentage of Cleaned Coal to Total Output
	Tonnage	Percentage	Tonnage	Percentage	Tonnage	Percentage					
King	288,371	19.29	560,122	44.00	470,873	36.82	1,314,866	1,145,514	870,309	274,688	66.25
Kittitas	5,708	0.33	1,355,694	77.96	379,335	21.81	1,741,237	21,449	20,523	926	1.17
Lewis	5,380	4.12	30,060	23.01	95,148	73.87	130,578	34,482	18,765	15,687	14.37
Pierce .....	.....	.....	373,134	62.39	227,915	37.61	603,049	397,194	608,768	238,438	99.62
Skagit .....	.....	.....	1,000	100.00	.....	.....	1,000	.....	.....	.....	.....
Thurston .....	.....	.....	.....	.....	204,688	100.00	204,688	.....	.....	.....	.....
Whatcom .....	.....	.....	4,841	100.00	.....	.....	4,841	6,397	4,841	1,550	100.00
The State	264,459	6.61	2,359,841	56.95	1,873,459	34.44	4,002,759	2,105,000	1,518,711	586,289	57.94

TABLE SHOWING AMOUNT AND PERCENTAGES OF EXPLOSIVES USED, BY COUNTIES, 1917.

NAME OF COUNTY	BLACK POWDER		DYNAMITE		PERMISSIBLE EXPLOSIVES		Total Explosives (Pounds)	Tonnage of Companies Making Returns	Tonnage of Companies Not Making Returns	Total Tonnage Mined
	Pounds	Percentage	Pounds	Percentage	Pounds	Percentage				
King	2,250	0.6	342,055	87.7	45,739	11.7	330,068	1,258,149	56,218	1,314,368
Kittitas	384,983	56.2	12,863	1.9	287,838	42.0	685,670	1,741,237	.....	1,741,237
Lewis	24,063	31.0	5,450	13.3	300	0.7	29,708	91,208	39,373	130,578
Pierce .....	.....	.....	182,912	86.4	28,721	13.6	211,633	531,794	74,236	606,049
Skagit .....	.....	.....	4,000	100.0	.....	.....	4,000	1,000	.....	1,000
Thurston	114,325	100.0	.....	.....	.....	.....	114,325	204,435	202	204,689
Whatcom .....	.....	.....	.....	.....	.....	.....	.....	4,841	.....	4,841
The State	535,566	36.6	547,272	38.1	362,562	25.3	1,435,400	3,882,711	170,048	4,002,759

TABLE SHOWING NAMES OF OPERATORS AND MINES, SYSTEM OF WORKING, NUMBER HAULAGE LOCOMOTIVES, AND LIGHTING SYSTEMS.

NAME OF OPERATOR AND MINE		System of Working	Horses and Mules	HAULAGE LOCOMOTIVES				Kind of Light Used	Number of Oil Safety Lamps	Number of Electric Safety Lamps
				Steam	Electric	Storage Battery	Gasoline			
KING COUNTY—										
Andrew Kennedy, Grand Ridge.....		Room and pillar.....	4		1			Open flame.....		
Carbon Coal & Clay Company, Carbon.....		Room and pillar.....			1			Open flame.....		
Carbon Coal & Clay Company, Daly.....		Room and pillar.....	1		1			Safety lamp.....	80	80
Denny-Renton Clay & Coal Company, Taylor, shaft.....		Chute and pillar.....			2			Open flame.....		
Denny-Renton Clay & Coal Company, No. 1 Mine.....		Chute and pillar.....	1		1			Open flame.....		
Durham Colliery Company, No. 1 Mine.....		Chute and pillar.....	2					Safety lamp.....	10	30
Durham Colliery Company, No. 2 Mine.....		Chute and pillar.....	2					Safety lamp.....	2	15
Hyde Coal Company, Hyde.....		Chute and pillar.....	7					Open flame.....		
National Coal Company, No. 6 Mine.....		Chute and pillar.....	2					Open flame.....		
Ozark Coal Mining Company, Navy.....		Room and pillar.....	3					Safety lamp.....	20	50
Pacific Coast Coal Company, No. 11.....		Room and pillar.....			10			Open flame.....		
Pacific Coast Coal Company, Ford.....		Chute and pillar.....						Safety lamp.....	342	177
Pacific Coast Coal Company, Cannon.....		Room and pillar.....			8		1	One section on safety lamps.....	84	50
Pacific Coast Coal Company, Oannon.....		Chute and pillar.....			2			Open flame.....		
Pacific Coast Coal Company, Issaquah.....		Room and pillar.....	1		2			Open flame.....		
Pacific Coast Coal Company.....		Chute and pillar.....			1			Open flame.....		
Pacific Coast Coal Company, Renton.....		Room and pillar.....	21					Open flame.....		
Pocahontas Coal & Coke Company, Pocahontas.....		Chute and pillar.....	6					Safety lamp.....	12	70
King County			50	1	29	1	2		450	472
KITUITAS COUNTY—										
Independent Coal & Coke Company, Queen.....		Room and pillar.....	5					Safety lamp.....	25	152
Northwestern Improvement Company, No. 6.....		Room and pillar.....	9			2		Open lights.....		
Northwestern Improvement Company, No. 3.....		Room and pillar.....	12		5			Safety lamp.....	30	130
Northwestern Improvement Company, No. 5.....		Room and pillar.....	2		7			Safety lamp.....	30	200
Northwestern Improvement Company, No. 7.....		Room and pillar.....	4		8			Safety lamp.....	40	240
Northwestern Improvement Company, Ole Elum.....		Room and pillar.....	5		2			Open flame.....		
Roslyn Cascade Coal Company, No. 1.....		Room and pillar.....	4					Open flame.....		
Roslyn Cascade Coal Company, No. 2.....		Room and pillar.....	4					Open flame.....		
Roslyn Coal & Coke Company, Plant.....		Room and pillar.....	6					Open flame.....		
Roslyn Fuel Company, No. 1.....		Room and pillar.....	3					Safety lamp.....	50	50
Roslyn Fuel Company, No. 2.....		Room and pillar.....	6					Safety lamp.....	170	170
Roslyn Fuel Company, No. 3.....		Room and pillar.....						Open flame.....		
Roslyn Fuel Company, Summit.....		Room and pillar.....	2					Open flame.....		
Roslyn Fuel Company, Wright.....		Development.....								
Kititas County			62	1	29	2			545	942

TABLE SHOWING NAMES OF OPERATORS AND MINES, SYSTEM OF WORKING, NUMBER HAULAGE LOCOMOTIVES, AND LIGHTING SYSTEMS.—Concluded.

NAME OF OPERATOR AND MINE	System of Working	Horses and Mules	HAULAGE LOCOMOTIVES				Kind of Light Used	Number of Oil Safety Lamps	Number of Electric Safety Lamps
			Steam	Electric	Storage Battery	Gasoline			
LEWIS COUNTY—									
Agnew Fuel Company, Monarch.....	Room and pillar.....	1					Open flame.....		
Centralia Coal Mining Company, Empress.....	Room and pillar.....	2					Open flame.....		
Ford's Prairie Coal Company, Ford's Prairie.....	Room and pillar.....	1					Open flame.....		
Mendota Coal & Coke Company, No. 1.....	Room and pillar.....	8					Open flame.....		
Olympia Coal Mining Company, Packwood.....	Room and pillar.....	2					Open flame.....		
Phoenix Coal Company, Lead.....	Chute and pillar.....		2				Safety lamp.....	48	25
Salzer Valley Coal Company, Salzer Valley.....	Room and pillar.....	1					Open flame.....		
Sheldon Coal Company, Sheldon.....	Room and pillar.....	1					Open flame.....		
Superior Coal Company, No. 2.....	Chute and pillar.....	1					Open flame.....		
Lewis County		17	2					48	25
PIERCE COUNTY—									
Carbon Hill Coal Company, Miller.....	Longwall.....			1			Open flame.....		13
Carbon Hill Coal Company, Wingate.....	Breast and pillar.....	1		4	1		Safety lamp.....	20	72
Carbon Hill Coal Company, Doughty.....	Chute and pillar.....			1			Open flame.....		
Carbon Hill Coal Company, Carbon No. 6.....	Breast and pillar.....			1			Safety lamp.....	15	42
Carbon Hill Coal Company, Carbon No. 10.....	Chute and pillar.....			2			Safety lamp.....	20	82
Carbon Hill Coal Company, Belmont.....	Chute and pillar.....	2					Open flame.....		
Carbon Hill Coal Company, Fairfax.....	Chute and pillar.....			2			Open flame.....		
Fairfax Mine, Inc., Fairfax.....	Chute and pillar.....	4		1			Open flame.....		
Gale Creek Coal Mining Company, Gale Creek.....	Room and pillar.....			0			Open flame.....		
Pacific Coast Coal Company, Burnett.....	Chute and pillar.....			2			Safety lamp.....	150	100
South Willis Coal Company, No. 8.....	Chute and pillar.....			2			Open flame.....		
South Willis Coal Company, No. 7.....	Chute and pillar.....	2		1			Open flame.....		
Wilkeson Coal & Coke Company, Wilkeson.....	Chute and pillar.....	8	4		2		Open flame.....		
Pierce County		12	4	21	3			206	279
THURSTON COUNTY—									
Washington Union Coal Company, Tono No. 1.....	Room and pillar.....	10				2	Open flame.....		
Thurston County		10				2			
THE STATE		151	7	79	6	4		1,048	1,718

EXPORTS OF COAL AND COKE IN LONG TONS FROM THE PORT OF SEATTLE.*

[illegible]

EXPORTS OF COAL AND COKE IN LONG TONS FROM THE PORT OF SEATTLE.*—Concluded.

[illegible]

NEW EQUIPMENT AND DEVELOPMENT WORK FOR THE YEAR 1917

KING COUNTY.

Andrew Kennedy Company, Issaquah.

Has driven 900 feet of gangway on No. 9 seam; 550 feet of gangway on No. 3 seam; 200 feet of gangway on No. 1 seam, and 140 feet of rock tunnel connecting Nos. 9 and 3 seams.

Black River Coal Company, Earlington.

Has driven 200 feet of gangway and 100 feet of slope.

Carbon Coal & Clay Company, Bayne.

In Daly mine, has driven 440 feet of gangway on No. 1; 500 feet of gangway on No. 3 south, and 550 feet of gangway on No. 3 north.

Has driven 760 feet of gangway in Carbon mine.

Has installed one 8 x 8 Gardner straight line air compressor, two jack hammers, and one 4 x 6 Rumsey triplex pump.

Number 3 seam in Daly slope was opened up during this year.

Denny-Renton Clay & Coal Company.

At Taylor, has driven 400 feet of gangway in No. 1 mine and reopened shaft.

At Renton mine, has driven 68 feet of gangway.

Durham Colliery Company, Durham.

Has driven 1,020 feet of gangway in No. 1 mine and 150 feet of gangway in No. 2 mine.

Has installed 25 kw. charging set for the purpose of charging storage battery locomotive and Edison electric safety lamps, and a transformer sub-station on account of change from steam power to purchased electricity since March 1st.

A rock tunnel from No. 2 to No. 3 seam was started July 10th and driven 620 feet.

Hyde Coal Company, Cumberland.

Has driven 4,354 feet of gangway and 432 feet of slope.

National Coal Company, Cumberland.

Has driven 300 feet of gangway on No. 6 seam; 225 feet of gangway on No. 5 seam; 207 feet of rock tunnel connecting 5 and 6 seams, and 710 feet of slope.

This mine is under development. Is moving hoist from No. 1 to No. 6 slope. Has erected new buildings for 100 men, new wash house, and 13 cottages for employees.

Northwestern Improvement Company, Durham.

Has driven 2,683 feet on rock tunnel to crosscut coal measures; 170 feet of gangway south of Mammoth bed; 114 feet in No. 1 air chute; 109 feet in No. 2 air chute, and 46 feet of crosscut.

This mine is in progress of development.

Osark Coal Mining Company, Cumberland.

Has driven 1,000 feet of gangway and 200 feet of slope.

Pacific Coast Coal Company.

At Mine No. 11, Black Diamond, has driven 5,031 feet of gangway, 83 feet of rock chute and 100 feet of rock tunnel. Is installing complete machinery for pulverizing coal for use in all the mine boilers and has same practically completed. Has built and is using a new wash house to accommodate 350 employees.

At Cannon mine, Franklin, has driven 396 feet of gangway. Has installed a new No. 14 Sirrocco fan driven by an Atlas steam engine; one snow-compound duplex pump, capacity 700 gallons, on 2nd level; and two duplex snow pumps, capacity each 350 gallons, for supplying water for domestic use at Black Diamond.

At Issaquah mine, Issaquah, has driven 1,677 feet of gangway.

At Ford mine, New Castle, has driven 3,842 feet of gangway, 581 feet of slope and 440 feet of rock tunnels in top and bottom landings for auxiliary slope.

At Renton mine, Renton, has driven 877 feet of gangway.

Pocahontas Coal & Coke Company, Palmer.

Has driven 300 feet of gangway and new fan way.

KITTITAS COUNTY.**Independent Coal & Coke Company, Cle Elum.**

Has driven 2,750 feet of entry, 2,750 feet of air course, 600 feet of slope and 600 feet of slope air course.

Has started rock slope to surface. To pitch 54 degrees and will be 350 feet long and used as a main air course.

Has installed a two-unit power plant with 16 x 16 Chuse engines, Westinghouse A. C. generators, 440 volt, 330 amps. Also installed two Whitcomb storage battery locomotives, equipped with Gould batteries; also equipped the mine with Edison electric safety lamps. At present erecting a large bath house with 33 showers, capable of handling 500 men.

Northwestern Improvement Company.

At Mine No. 6, Roslyn, has driven 736 feet of rope entry, and entry as follows: 833 feet in 4th east; 187 feet in 9th east; 183 feet in 10th east; 661 feet in 11th east; 203 feet in 12th east; 1,185 feet in 11th west, and 401 feet in 12th west; a total of 3,653 feet of entry. Has driven 1,373 feet of auxiliary slope on 4th east. Has installed one 50 h. p. electric hoist.

At Mine No. 3, Ronald, has driven entry as follows: 384 feet in 5th east; 232 feet in 7th east; 1,671 feet in 8th east; 280 feet in 9th east; 176 feet in 8th west, and 1,268 feet on the 4th west counter of the hill; a total of 4,011 feet of entry. Has driven 561 feet of main slope.

At Ronald Mine No. 2, Big Vein, has driven 193 feet of gravel tunnel and slope head; 910 feet of main slope. Entry as follows: 1,737 feet on 1st east; 760 feet on 2nd east; 882 feet on 1st west, and 763 feet on 2nd west; a total of 4,142 feet of entry.

At No. 3 mine, has installed one 24 x 40 single drum Litchfield hoist; one 10 x 12 air compressor and one 54 x 70 smoke stack.

At Mine No. 5, Roslyn, has driven entry as follows: 250 feet in 5th east dip counter; 222 feet in 5th east haulage way; 177 feet in 5th east dip

sump; 51 feet in 7½ east; 183 feet in 7th east; 506 feet in 7½ east counter; 514 feet in 7th east counter No. 3; 787 feet in 8th east; 1,859 feet in 8th east counter, No. 1 entry; 61 feet in 8th east counter, No. 2 entry; 993 feet in 8th east counter, No. 3 entry; 265 feet in 9th east; 678 feet in 7th west, and 1,150 feet in water level east; a total of 7,696 feet of entry. Has driven 542 feet of slope. Has widened and double tracked 1,800 feet of old slope. Has installed one electric safety lamp house and equipment for 250 Edison lamps; one Cameron centrifugal pump, capacity 300 gallons, and 35 h. p. motor to drive same; one Smith-Valle vertical triplex pump, capacity 150 gallons, and 40 h. p. G. E. motor to drive same; one set reverse gear for old hoist to suit double track slope.

At No. 7 extension, Cle Elum, has driven 2,291 feet of inclines and the following entry: 335 feet in 1st west; 471 feet in 2nd west; 822 feet in 3rd west; 489 feet in 4th west; 1,029 feet in 5th west; 21 feet in 6th west; 696 feet in 7th west; 187 feet in 2nd east; 627 feet in 3rd east; 657 feet in 4th east; 608 feet in 5th east; 545 feet in 6th east; a total of 6,487 feet of yardage. Has installed one 50 h. p. Denver Engineering Works hoist.

At No. 7 mine, Cle Elum, has driven 2,805 feet of slope and inclines. Has driven the following entry: 689 feet on 6th east counter; 1,079 feet on 7th east; 377 feet off high line incline; 1,436 feet off 20 incline; 7 feet on 4½ west; 319 feet off 29 room, 4½ entry; 551 feet off 4½ west, No. 1 back slant; 153 feet on 7th west, and 783 feet off 8th west. A total of 5,393 feet of entry. Has installed one Jeanesville 4-plunger pump, size 5¾ x 18, 400 gallons per minute against 770 feet head, through a 10-inch column pipe inserted in a vertical borehole. The pump is direct connected to a 100 h. p. A. C. motor, 2,200 volts, wires passing through a separate vertical borehole which is encased with a 3-inch iron pipe. All work is installed in a concrete pump room with sheet iron doors.

At No. 8 mine, Roslyn, the outside plane from mouth of tunnel to tippie has been completed and double tracked. This plane is 7,200 feet long, of which 1,700 feet is wooden trestle. A new tippie has been built to serve both Nos. 6 and 8 mines, in connection with this is a house coal loading station connected with the tippie by a bridge across the tracks. An engine house 43 x 83 and a boiler house 31 x 41 have been built. A 25,000-gallon wooden tank has been built above the mouth of tunnel. Three hundred eighty-five feet of snow shed, 26 feet wide, have been built over tracks at head outside plane and 290 feet of sheds, 16 feet wide, over track to boiler house. Has installed two H. B. & W water-tube boilers; one 20 x 60 single drum Bullock hoist; one 24 x 18 double drum Vulcan hoist; one 12 x 12 steam driven air compressor; two 6-ton storage battery locomotives. Inside of the mine the rock tunnel from surface to coal bed for engine plane was extended 260 feet, making a total distance of 1,290 feet from the surface to the coal bed. The engine plane was extended 637 feet. A thirty-five degree rock plane, 85 feet long, was driven from the main return airway to the surface for connection with proposed fan location.

Roslyn Cascade Coal Company, Ronald.

At No. 1 mine, has driven 1,371 feet of entry. At No. 2 mine, has driven 504 feet of entry and installed one Krogh centrifugal pump, capacity 200 gallons, electrically driven.

Roslyn Coal & Coke Company, Lakedale.

Has driven 737 feet of entry; 225 feet of slope, and 23 feet of airway.

Roslyn Fuel Company.

At No. 3 mine, Lakedale, has driven 150 feet of entry and 2,036 feet of slope. At Summit mine, Cle Elum, has driven 150 feet of entry.

At Wright mine, Lakedale, has driven 510 feet of entry and 300 feet of slope.

LEWIS COUNTY.**Agnew Fuel Company, Kopiah.**

Has driven 1,550 feet of slope; 500 feet of slope air course; 400 feet of plane and 560 feet of plane air course.

Has installed one Dexter fan; one Ingersoll-Rand air compressor; two boilers and three pumps.

Ford's Prairie Coal Company, Centralia.

Has driven 400 feet of entry and 400 feet of airway.

Mendota Coal & Coke Company, Mendota.

Has driven 2,545 feet of entry, reopened No. 13 room, 3rd south, escapement way, and installed a new pair of top scales.

Olympia Coal & Mining Company, Packwood.

Has driven 600 feet of gangway and 50 feet of slope.

Phoenix Coal Company, Ladd.

Has driven 320 feet of gangway on No. 3.

Superior Coal Company, Chehalis.

Has driven 200 feet of gangway and opened a new air shaft and timber chute to surface.

PIERCE COUNTY.**Carbon Hill Coal Company, Carbonado.**

At Carbon No. 6, has driven 120 feet of gangway. At Carbon slope, has driven 900 feet of double compartment slope, 450 feet of rock tunnel from 4th level, Wingate, to connect with this slope, and 450 feet of chute from face of tunnel to strike bottom of slope. Has installed one 800 h. p. electric hoist.

At Carbon No. 10, has driven 252 feet of slope, and is driving rock tunnel to Carbon No. 6, which, when completed, will be 850 feet long, and of which 300 feet has been driven. Is driving rock tunnel from near face of Carbon No. 10 to Wingate seam, to be 900 feet long and of which 762 feet has been driven.

At Wingate mine, has driven 650 feet of gangway.

At Douty mine, has driven 30 feet of gangway on No. 9 seam.

At Miller mine, has driven 340 feet of gangway.

At Melmont mines, has driven 1,500 feet of gangway.

Fairfax Mine Incorporated, Fairfax.

Has driven 1,300 feet of gangway.

Gale Creek Coal Mines Company, Wilkeson.

Has driven 1,000 feet of gangway.

Pacific Coast Coal Company, Burnett.

Has driven 2,896 feet of gangway and 503 feet of rock tunnel. Is installing and practically completed a new and modern bunker, coal tipple, washery, and a new bridge from slope mouth to cleaning plant, to replace old equipment which is no longer fitted for the work required.

South Willis Coal Company, Spiketon.

Has driven 3,500 feet of gangway.

Wilkeson Coal & Coke Company, Wilkeson.

Has driven 3,000 feet of gangway.

SKAGIT COUNTY.

Cokedale Coal Company, Sedro Woolley.

Has driven 2,300 feet of gangway, and air chute to the surface on the Klondike vein.

Fan of 50,000 cubic feet per minute has been ordered and equipment for a 500-ton mine. Power line is now building in and railroad expected to be in to Cokedale sometime in February, 1918.

THURSTON COUNTY.

Washington Union Coal Company, Tono.

Has driven 4,146 feet of entry and an escape way from firm entry off 5th south.

WHATCOM COUNTY.

Whatcom County Coal Company, Blue Canyon.

Is drawing out the last of the pillars in the present mine.

**DETAILED SYNOPSIS OF FATAL ACCIDENTS OCCURRING IN THE
STATE OF WASHINGTON FOR THE YEAR 1917.**

January 12.—Carbon Hill Coal Company, Mine No. 6 (old Carbon No. 9), Carbonado: Owen Williams, nationality Welsh, aged 28 years, occupation timberman helper, married, and Joe Wallock, nationality Pole, aged 47 years, occupation miner, single. Killed while timbering a crosscut on the pitch when the top and rib caved in. The cave caught both men and squeezed them against a pile of loose timbers that was in the crosscut. Williams leaves a widow.

This accident could have been avoided only by the men themselves being more careful.

January 23.—Northwestern Improvement Company, Hill Workings Mine No. 3, Ronald: Fred Clarkson, nationality American, aged 26 years, occupation miner, single. Killed by a fall of rock while he was working on the stumps (pillar workings) in the 2nd east. The deceased was loading a car on the low side of the entry. The stump has been removed a short distance past the car. The roof is brushed about two feet when the entry is driven. This two feet of roof is kept up when the stumps are drawn and it was a piece of this top that fell off the side and caught the deceased as he was loading the car.

The prevention of such accidents lies largely with the miners themselves and it is only by careful examination of the roof, as the work progresses, that these accidents can be avoided.

Injured January 24, 1917; died January 25.—Carbon Hill Coal Company, Mine No. 6 (old No. 9), Carbonado: Martin Revine, single. Fatally injured by being squeezed between a timber and the controller box of the motor on which he was riding. The deceased had been told not to ride on the motor which was backing up. A car loaded with timber was next to the motor and one of the timbers projecting over the top caught against one of the sets of timber. This forced it through the end of the car and caught the deceased. Both the motorman and deceased were inexperienced and did not use good judgment in backing the cars out with a load of timber next to the motor.

This accident could have been avoided if the deceased had obeyed instructions and the motorman used better judgment in not pushing a load of timber a head of him.

February 6.—Puget Sound Traction, Light & Power Company, Renton mine, Renton: Steve Chernick, nationality Austrian, aged 29 years, occupation timberman helper, single. Killed by a fall of rock. The deceased and his partner were opening the air course, or counter, between Nos. 11 and 12 planes, 10th south. The loose material or clod is allowed to come down, as the timber is removed, to the main roof which is sandstone. While in the act of cleaning out the timber and loose material a large piece of sandstone fell and caught the deceased, causing his death by suffocation and squeezing.

This accident could have been avoided if the roof had been more carefully inspected and timber placed under this rock and not so much reliance placed on the usual condition of the roof. The prevention of such accidents

is with the men themselves, who personally conduct this work and the only thing to do is to use more care and timber.

February 21.—Puget Sound Traction, Light & Power Company, Renton mine, Renton: John Azzola, nationality Italian, aged 26 years, occupation miner, single. Killed by coming in contact with live trolley wire. This accident occurred outside and near the entrance to the mine. A trip of cars was standing in the yard near the mine entrance and the deceased as he came out from work, instead of going up the steps and across the bridge to the check office, attempted to cross between the cars. His head came in contact with the live trolley wire, carrying 500 volts and which is over six feet above the rail at the point where he attempted to cross. An attempt was immediately made to revive him but he was probably killed instantly.

This accident could have been prevented if the deceased had gone over the bridge or if the wires had been guarded.

Injured March 9, 1917; died March 10.—Northwestern Improvement Company, Mine No. 5, Roslyn: E. Tometich, nationality Austrian, aged 26 years, occupation miner, married. The deceased was taking out two loaded cars from the entry face where he was working. He was either pushing or riding the last car when the front car jumped the track and knocked out a timber, letting down some rock, which fell on him, causing injuries which resulted in his death. He leaves a widow and one child.

Injured April 17, 1917; died April 18.—Northwestern Improvement Company, Mine No. 3, Ronald: M. Gallinatti, nationality Italian, aged 48 years, occupation rockman, married. Sustained a cerebral hemorrhage while carrying a sack of cement in the mine on the morning of April 17. The deceased complained of having a severe pain in the head and was taken out of the mine on the trip but walked to the depot, taking a train to Roslyn. He died about 1 a. m., April 18. A post-mortem examination showed blood clots on brain. He leaves a widow and five children.

April 19.—Carbon Hill Coal Company, Wingate mine, Carbonado: William Hamens, nationality Welsh, aged 30 years, occupation fireboss, single. Asphyxiated by marsh gas when he attempted to penetrate a body of gas in the chute in which he was working. The mine was idle on account of labor trouble and the deceased and his partner, also a fireboss, were working as miners, one in each of two chutes driving on No. 5 seam to connect with new slope. About 10 a. m. on the morning of the accident a feeder of gas was struck in the chute worked by the partner of the deceased. The deceased had his attention called to same and it was decided to repair the stoppings to increase the air at the face. They worked until 2 p. m. when it was decided to go back up the chute No. 2 to the face. Gas was encountered at the second crosscut. The deceased had left his safety lamp, which was not lighted in the next crosscut, as he was using an electric lamp. In spite of his partner urging him not to do so, the deceased attempted to get his lamp and penetrated the gas about fifteen feet from where they found it. He was overcome. His partner attempted to reach him but was also overcome, but fell out of the gas. When he was able to get assistance he did so and the body of the deceased was recovered, but all attempts to resuscitate him failed.

The deceased had been filling the position of fireboss about four years at Carbonado and should have known better than to attempt to go into a body of gas such as he knew was present.

June 26.—Carbon Hill Coal Company, Douty mine (No. 3 seam), Carbonado: John Bradley, nationality Irish, aged 35 years, occupation fireboss, married. Killed by falling down chute. The deceased was starting chute, which had become blocked, and was evidently injured as he came down the angle chute, which he was starting, feet first, making no outcry or endeavor to save himself. He went past a man in a crosscut who was watching him, but whose efforts to save him proved unavailing as coal coming down the chute broke the rescuer's hold. The deceased was dead when recovered. He leaves a widow and six children.

June 28.—Pacific Coast Coal Company, Ford mine, New Castle: Joe Contario, nationality Italian, aged 24 years, occupation timberpacker, single. Fatally injured by being struck by falling timber. The deceased was in the manway of the timber chute about one hundred and fifty feet below a timber truck loaded with timber. Another workman passing the truck slipped and fell on a timber, knocking the timber loose from the truck, which allowed the timber to go down the manway, catching the deceased and fatally injuring him.

This accident could have been avoided if the timbers had been loaded more securely on the truck.

June 30.—Northwestern Improvement Company, Mine No. 3, Ronald: Joe Lesh, nationality American, aged 16 years, occupation parting boy, single. Fatally injured by being struck by mine cars. It was one of the duties of the deceased to bell the trips on the parting at the top of the main slope. Just previous to the accident he was in a tool house, which is on the opposite side of the bell post. On hearing the trip coming he started to cross the track, but was too late, the cars striking and running over him, causing injuries which resulted in his death shortly after he was removed to the hospital.

August 1.—Roslyn Fuel Company, Beekman No. 1, Beekman: Warren Pettit, nationality American, aged 37 years, occupation mechanic. Electrocuted by coming in contact with charged lead covered feed line which he was handling. Alternating current at 440 volts was carried by this cable. The deceased and helper were preparing to remove an electric hoist from a crosscut of the main slope. It was necessary to move the cable in order to remove the hoist. The deceased had been handling the wire for some time without it being charged. On looking toward the deceased his partner saw him hanging on the wire with both hands. He spoke to him but received no answer and he then removed the deceased from the wire by means of a shovel. Death was probably instantaneous. On investigation it was found that where the feed line was attached to the main cable the insulation on one of the three wires had pulled loose, allowing the lead covering to come in contact with the bare wire, thereby charging it and causing the accident. The deceased leaves a widow and eight children.

August 17.—Northwestern Improvement Company, No. 7 mine, Cle Elum: Dominic Accastille, nationality Italian, aged 26 years, occupation miner, single. Electrocuted by coming in contact with live trolley wire, which carried current at a voltage of 500 volts, D. C. The deceased was

loading at the bottom of 59 chute of the 6th level west. The motorman had gone by with the trip and left him two empty cars. While in the act of changing the car of the next room inby, the motorman heard the deceased shout. On going out to him he found the deceased lying unconscious on the track in front of the car. He had evidently come in contact with the trolley wire when he run his car out of the switch. Efforts were made to revive him but without success.

The only way such accidents can be avoided is to guard the trolley wires so no one can come in contact with them. They had started to do this at this mine but had not completed the work.

Injured September 21, 1917; died September 22.—Northwestern Improvement Company, Mine No. 3, Ronald: John X. Adams, nationality American, aged 35 years, occupation driver boss and assistant foreman, married. Fatally injured when he attempted to get out of derailed car or by being thrown out of same. On the day of the accident the deceased was acting in the place of the regular roperider who was absent from his work. The rope rider had been taken off the slope trips. The deceased was taking the last empty trip into the mine to put the man trip on for the slope. In some manner unknown, the last car in which the deceased was riding left the track at a small curve in the rock tunnel, and the deceased either struck against a timber when he attempted to get out of the trip or was thrown out. There was no evidence of anything falling that could have struck the deceased and caused the injuries to his head which resulted in his death. All cars were on the track when the trip reached the parting. He leaves a widow and two children.

The only way such accidents can be avoided is not to have roperiders where the trips travel so fast, and no one ride trips other than regular man-trips.

October 3.—South Willis Coal Company, New Pittsburg mine, Spiketon: Oscar Kalkkonen, nationality Finn, aged 25 years, occupation miner, single. Suffocated by coal in chute of No. 7 pillar when he fell down the chute. The deceased and James Parlari were working on the pillar. The night shift had fired some shots which dislodged the timber near the bottom of the angle. The men were in the act of re-setting this timber when the deceased thought he heard a cave in the pillar. He attempted to get into the crosscut below and as he was crossing the chute the coal started to run and he went down with the coal. They loaded twenty-four cars out of the chute before he was loaded out.

October 10.—Carbon Hill Coal Company, outside incline, Carbonado: Mike Kovich, nationality Austrian, aged 47 years, occupation outside laborer, married. Fatally injured by being run over by loaded cars destined for No. 1 boiler track at bottom of incline. It was the duty of the deceased to unload cars at the boiler room. The switch to the boiler room is about 100 feet above the bottom of the incline. Loaded cars are delivered to the boiler track by attaching them to the man-car on the incline by a chain and then hoisting and dropping them back into the boiler house track. When the trip stopped above the switch the chain broke and the cars run back, striking the deceased and fatally injuring him. He leaves a widow and six children somewhere in Europe and a son in Carbonado.

It was stated at the investigation, that orders had been issued that not more than two cars be hoisted at one time. These instructions were not carried out as three cars were on the chain when the accident occurred.

October 23.—Pacific Coast Coal Company, Burnett mine, Burnett. Tony Pasero, nationality Italian, aged 35 years, occupation inside laborer, single, and Nick Rusko, nationality Austrian, aged 28 years, occupation inside laborer, single, were killed by falling down No. 8 chute, north 3, third level. Chute No. 8 was to be used as a timber chute. The method used is to lay a track in the manway side of the chute and pull the timber up the pitch by means of a truck and a cable which passes around a sheave wheel in the chute, and truck being raised by the haulage motor pulling on the gangway. The sheave wheel had been placed at the 7th crosscut and when the $\frac{3}{4}$ -inch cable was taken up the pitch and passed around the wheel it was found to be 110 feet too short, so it was decided to lower the cable 55 feet. The sheave wheel was moved 55 feet below, which brought it a short distance above the 6th crosscut.

On the night of the accident the deceased men, with Angelo DePerry, were lowering the cable from the 7th crosscut to the sheave at the 6th. According to DePerry's statement, they had attached the long side of the cable to a post just below the new sheave by means of a spike, he took the loop, one of the men stood at the 6th crosscut and the other a short distance above this man. If at any time they needed a rest all he had to do was to pass the loop around one of the posts on the side. They had gone down the chute about 35 feet when the lower man complained of the cable being heavy and the next instant the cable was jerked out of DePerry's hands and the two men went down the chutes. The long end broke loose from its fastening and went down the chute with the men.

The pitch here is about 60° and it appears that one of the men released his hold on the cable, throwing the strain on the other two; whether this was due to him slipping is not known. If one of the men had not complained of the cable being heavy, it would appear possible that a portion of the moving side of the cable hung up in the chute and later broke away. The men had discussed the job before hand and thought it was safe.

The prevention of accidents of this kind is largely with the men themselves and in future work of this nature, the cable or load should be lowered by means of a rope passed around one of the timbers and attached to the load.

November 7.—Carbon Hill Coal Company, Wingate mine, Carbonado: Patrick Deegan, nationality Irish, aged 53 years, occupation inside laborer, married. Asphyxiated by marsh gas in chute No. 60, 4th level. On making his inspection of the mine on the morning of the 7th, the fireboss found No. 60 temporarily full of gas. He fenced off the gangway at No. 59 by placing two large boards across the gangway and marking same plainly to keep out, that place contained gas. He also marked gas on the bulletin board outside of the mine. The gangway and chutes as far up as the counter at this mine are driven in the foot wall rock. The chute had just struck the coal. The gangway and temporary chutes are ventilated by compressed air. On the morning of the accident, the deceased walked in the gangway at about 7:30 a. m. He was met by the chute starter and told that he could not go into the gangway as it was fenced off on account of gas. The deceased replied "that he would go in and see for himself." He

went into the gangway, passed over the danger sign and went a short distance up the chute, when he was overcome. He was found there about 15 minutes later when the fireboss went to the place to clear it. Efforts to revive him failed. Nothing definite is known of his conjugal relations.

This accident was due to carelessness or ignorance on the part of the deceased man himself, who was wearing an electric lamp at the time of the accident. None of the officials had instructed him to stay out, but the danger sign was placed as required by law and should be sufficient warning to keep out. However, when any dangerous condition is known to exist in a place, and it cannot be made safe before men enter the mine, all persons who work in the place should be warned to remain away until it is made safe.

December 5.—Carbon Hill Coal Company, Wingate mine, Carbonado: Joe Futan, nationality Austrian, aged 48 years, occupation miner, single. Suffocated at face of counter fourth level south, Wingate mine. Futan was working at the face of counter and encountered an outburst of gas which threw the solid coal back from the face, filling the counter for a distance of 40 feet back from the face. Futan was buried under the fine coal and was dead when workmen reached him.

December 6.—Ozark Coal Mining Company, Navy mine, Cumberland: Steve Tomic, nationality Austrian, age 39, occupation miner, married. Killed by a fall of coal in 27 pillar water level. Tomic and partner had fired a shot and Tomic was trimming off the loose coal and shoveling it in the chute. A piece of top coal under which he was working fell, striking him on the back of the head, crushing it. He died shortly after from the injury.

Such accidents can only be avoided by care on the part of the men themselves.

December 17.—Wilkeson Coal & Coke Company, Wilkeson:

	Nationality.	Age.	Occupation.	
Joe Rusnak	Hungarian ...	39	Miner	Married
Mike Semak	Austrian	45	Miner	Married
William Skorupsky	Polish	33	Miner	Married
John Tomco	Austrian	37	Miner	Married
William Heino	Finn	35	Miner	Married
Petre Machetti	Italian	38	Miner	Married

The above named persons were killed on December 17 by a rush of water, clay and gravel which filled the workings in No. 3 south, east dip, where they were working. This accident occurred on the night of December 17 about 11:45 p. m. The No. 3 seam was worked in this part of the mine from a rock tunnel driven from No. 2 seam inside of the last fault encountered, or near the extreme southeast end of the property. The chutes were numbered north and south from the rock tunnel No. 33½, being the last place on the south side. The pitch is about 45° in this part of the mine and chutes had been driven and pillars pulled from 31 out to No. 25 at the time of the accident. On the night of the accident eight men were working on the pitch in the following places: W. J. Heino and Mike Semak in No. 24 pillar above the 8th crosscut; P. Marchetti and Joe Rusnak in No. 23 chute near the 5th crosscut taking down the top coal placing cogs, this work being done before they started to take out the pillar. G. W. Thurston and Jacob Flies were driving No. 22 chute, which had reached the 7th crosscut. Wm. Skorupsky and John Tomco were reopening No. 20 chute from the gangway to counter and were working just below the counter at the time of the accident. An account of the accident as told by Thurston and

Flies who worked in No. 22 chute and who were the only men out of the eight men who escaped was as follows:

"At about 11:45 p. m. we were in our working place, No. 22 chute, when we felt a concussion of the air which came with such force it lifted us off our feet. When we recovered we started down the chute to the 5th crosscut or counter which was the intake for this section of the mine. When we reached the 6th crosscut we encountered water rushing through from No. 23. Here we were overcome by the force of water and air. When we regained consciousness we started again and reached the 5th crosscut from where we followed the intake airway to the air chute and reached the outside and gave the alarm."

Rescue parties immediately entered the mine and found the gangway partly filled with water and mud from the rock tunnel into No. 12 chute, where it was impossible to go further. The chutes were filled inside of No. 20 on the 5th counter. The work of clearing the gangway and reaching the places where the men were working was started at once. At No. 16 chute the gangway was filled to the roof and from this point the work proceeded very slowly. On the morning of January 15th, nearly a month after the accident, the body of P. Marchetti was found at No. 21 chute on the gangway. On the morning of January 19th the body of John Tomco was found in No. 20 chute near the counter. The body of Wm. Skorupsky was found on the morning of January 20th in No. 20 chute near where John Tomco was found. On January 23rd the body of Mike Semak was found in the counter at No. 21½ chute. The gangway was cleaned to No. 25 chute and the counter to No. 24 without finding the other two bodies. The gangway had filled both ways from No. 21½ chute and it is thought that both Joe Rusnak and Wm. Heino were carried to the inside. The gangway was in bad condition at No. 25 chute and it was not considered safe to go beyond that point on account of the pillars being pulled. Work was stopped on February 20th and the hope of reaching the bodies of the two men abandoned.

The cause of the accident will never be definitely known. It is thought to have been caused by either of the two following causes: First, that a heavy cave had occurred which released a body of water from the overhanging strata. Second, No. 26 chute had been driven into the gravel for some distance in an attempt to reach the surface. It made considerable water until the dry period of last summer and fall when it had almost stopped running. In the meantime the pillars were pulled below this chute and the ground caved. There is a possibility that when the wet season came on the water started to run again, the caved ground forming a dam which held the water until the angle was driven nearly through at the top end of No. 24 pillar when the water broke through and carried the clay and mud into the workings below.

The second theory seems the most reasonable on account of the amount of clay, mud and gravel that filled the chutes and gangway. Following is the verdict of the coroner's jury:

Jan. 22, 1918.

STATE OF WASHINGTON, COUNTY OF PIERCE—SS.

BEFORE THE CORONER OF PIERCE COUNTY.

In the Matter of the Inquest on the body of Pete Marchetti.

We, the jury, in the above entitled matter, having been duly empaneled and sworn to determine the cause of death of Pete Marchetti, and having viewed the body

of the said Pete Marchetti, and having heard the testimony of witnesses, find that the deceased came to his death at Wilkeson, Pierce county, Wash., on the 17th day of December, 1917; and we find the cause of death to be as follows:

Caught in a cave-in in the mine of the Wilkeson Coal & Coke Co. Cause of cave-in not known to the jury.

T. J. ANDERSON,
GUS A. CARLSON,
MIKE BRUCHOK, JR.,
ELLIS ROBERTS,
F. E. DICE,
E. A. WESTFALL.

December 26.—Carbon Hill Coal Company, Douty mine, Carbonado: Mike Moras, nationality Austrian, age 23, occupation timber packer, single. Killed at the bottom of timber chute to this mine. Moras was working with other timber packers removing timber from bottom of chute through which all timber for this mine is taken in. The foreman had gone out the timber chute and had told one of the timber packers that he would tell the man on the outside to send timber down. Moras came up to the chute to fill his lamp with water, the other man did not tell him that timber was to be sent down, he was struck by a timber coming down the chute and instantly killed.

This was a case of carelessness on the part of his partner in not warning him away from the chute as he knew the timber was to be sent down.

December 29.—Carbon Hill Coal Company, outside yards, Carbonado: Ben Esche, nationality French, age 16, occupation car coupler, single. Killed at the yards at bottom of incline by being run over by steam locomotive. Esche was on his way to work at the cleaning plant further down the canyon. The locomotive that runs from the yard to the bunker was standing in the yard. It started towards the bunker and it is supposed that the deceased ran to catch it to ride down to the bunkers. It started back in the opposite direction just as Esche reached it catching him and rolling him underneath before the engineer knew he was there. He died from the injuries received the same day.

It was a direct violation of the mine rules and mining laws to ride on mine cars or locomotives, but from what I could learn this violation, by the boys at the bunkers, had been going on for some time. When accidents such as this happen and the rules have been violated without an effort to stop it the officials are as much to blame as the one breaking the rule. A violation of the rules should be stopped at once and not allowed to go on until someone is either killed or seriously injured.

FATAL CASUALTIES, 1917.

Date	NAME	Nationality	Age	Occupation	Residence	Mar- ried	Single	Wid- ows	Chil- dren	De- pend- ents*	Cause of Death
Jan. 12	Owen Williams	Welsh	28	Timberman helper	Carbonado	1		1		1	Fall of rock and coal.
Jan. 12	Joe Wallock	Pole	47	Miner	Carbonado		1				Fall of rock and coal.
Jan. 23	Fred Clarkson	American	29	Miner	Roslyn		1			2	Fall of rock.
Jan. 23	Martin Revine †	English	28	Timber packer	Carbonado		1				Squeezed by timber and haulage motor.
Feb. 6	Steve Chernick	Austrian	29	Timberman helper	Renton		1			1	Fall of rock.
Feb. 21	John Azola †	Italian	25	Miner	Renton		1			2	Electrocuted by live trolley wire.
Mar. 9	E. Tometchik(a)	Austrian	20	Miner	Roslyn	1		1	1	2	Car knocked timber out and rock fell.
Apr. 17	M. Gallinatti(b)	Italian	48	Rockman	Roslyn	1		1	5	6	Cerebral hemorrhage from lifting load of cement.
Apr. 19	Wm. Hamens	Welsh	30	Fireboss	Carbonado		1			1	Asphyxiated by marsh gas.
June 26	John Bradley	Irish	25	Fireboss	Carbonado	1		1	6	7	Falling down chute.
June 28	Joe Contario	Italian	24	Timber packer	New Castle		1				Struck by falling timber.
June 30	Joe Lesh	American	16	Parting boy	Ronald		1			2	Struck by mine cars.
Aug. 1	Warren Pettit	American	37	Mechanic	Beckman	1		1	8	3	Electrocuted by charged lead cable.
Aug. 17	Dom. Acastille	Italian	35	Miner	Cle Elum.		1			2	Electrocuted by live trolley wire.
Sept. 21	Jno. X. Adams(c)	American	35	Asst. foreman	Ronald	1		1	3	3	Jumping from or thrown from derailed mine car.
Oct. 2	Oscar Kalkoner	Finn.	25	Miner	Spilketon		1			2	Suffocated by coal in chute.
Oct. 10	Mike Kovich †	Austrian	47	Outside laborer	Carbonado	1		1	7	5	Run over by mine cars.
Oct. 23	Tony Pasero	Italian	35	Inside laborer	Burnett		1			1	Falling down chute.
Oct. 23	Nick Rusko	Austrian	28	Inside laborer	Burnett		1				Falling down chute.
Nov. 7	Patrick Deegan(d)	Irish	53	Inside laborer	Carbonado	1		1			Asphyxiated by marsh gas.
Dec. 5	Joe Futam	Austrian	48	Miner	Carbonado		1				Outburst of gas.
Dec. 6	Steve Tomic	Austrian	39	Miner	Cumberland		1				Fall of coal.
Dec. 17	Joe Rumanak	Austrian	39	Miner	Wilkeson	1		1		7	Cave in of gravel, water and rock in pillars.
Dec. 17	Petre Marchetti	Italian	38	Miner	Wilkeson	1		1	6	3	
Dec. 17	Mike Semak	Italian	33	Miner	Wilkeson	1		1	2	3	
Dec. 17	Wm. Skorusky	Pole	45	Miner	Wilkeson	1		1	2	3	
Dec. 17	John Tomco	Austrian	37	Miner	Wilkeson	1		1	2	3	
Dec. 17	Wm. Helio	Finn.	35	Miner	Wilkeson	1		1	7	8	Struck by falling timber.
Dec. 26	Mike Morris	Austrian	23	Timber packer	Carbonado		1		3	3	
Dec. 29	Ben Esche †	French	16	Coupler	Carbonado		1				Run over by locomotive.
	Totals(e)					(f) 15	(g) 15	(d) 15	50	72*	

* Children over 16 years are not classed as dependents. † Killed outside of mine. ‡ Died January 24. (a) Died March 10. (b) Died April 18. (c) Died September 22. (d) Nothing definite known of conjugal relations of Patrick Deegan. (e) 3 killed outside. (f) 1 killed outside. (g) 2 killed outside.

RECAPITULATION OF FATAL CASUALTIES, 1917.

Residence	No.	Occupation	No.	Nationality	No.	Cause of Death	No.	Name of Mine	No.
Beekman	1	Assistant foreman	1	American	4	Asphyxiated by marsh gas	2	Carbon Hill Coal Co., No. 9 (old No. 9)	3
Burnett	2	Coupler	1*	Austrian	9*	Clave of rock, gravel and water	6	Carbon Hill Coal Co., Wingate	3
Cie Eium	1	Fireboss	2	English	1	Electrocuted by live trolley wire	2*	Carbon Hill Coal Co., Dooty (old No. 3)	2
Carbonsado	10†	Laborer, inside	4	Finn	2	Electrocuted by charged lead cable	1		
Cumberland	1	Laborer, outside	1*	French	1*	Fall of coal	1	Carbon Hill Coal Co., outside incline	1*
New Oastle	1	Mechanic	1	Irish	2	Fall of rock, car knocked prop out	1	Carbon Hill Coal Co., No. 3	1*
Renton	2*	Miner	14*	Italian	6*	Fall of rock	1	Northwestern Imp. Co., No. 3	4
Ronald	2	Parting boy	1	Pole	2	Fall of rock and coal	2	Northwestern Imp. Co., No. 5	1
Roslyn	3	Timberman helper	2	Welsh	1	Falling down chute	3	Northwestern Imp. Co., No. 7	1
Spiketon	1	Timber packer	3	Hungarian	1	Jumping or thrown from derailed car	1	Ozark Coal Mining Co.	1
Wilkeson	6					Lifting load of cement	1	Pacific Coast Coal Co., Burnett	2
						Outburst of gas	1	Pacific Coast Coal Co., Ford-New Castle	1
						Squeezed by timber and motor	1	Puget Sound Traction, Light & Power Co., Renton	2*
						Struck by mine cars	2*		
						Struck by falling timber	2	Roslyn Fuel Co., Beekman No. 1	1
						Suffocated by coal in chute	1	South Willis Coal Co., New Pittsburgh	1
						Run over by steam locomotive	1*	Wilkeson Coal & Coke Co., So. 3	6
Total	30		30		30		30		30

* 1 killed on surface. † 3 killed on surface and 27 underground. ‡ 2 killed on surface.

FATAL ACCIDENTS FOR TWELVE YEARS BY LEADING CAUSES.

CAUSE	1900	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1900-1917
Cave in pillars, including material sliding down.....	1	1	1		1	1				1	2		5
Clothing caught by machinery.....													4
Drowned by underground body of water, cavern of gravel.....					1				1			6	8
Electrocuted.....	1	3	1	4	3	2	3	1	1	2	2	3	23
Explosion of gas or dust.....	1	11	1	13	18			6	1	31	2		84
Explosion of powder or caps.....					2			1			1		4
Falls of rock and coal.....	7	11	12	10	8	3	4	7	7	6	5	6	91
Flying pieces from blasts, including missed shots.....		1		1	1	1	1		1		4		10
Man falling (shaft, slope, chute, etc.).....	1		1	2	2	3	3			1	1	3	17
Outburst of gas, blowing out coal.....				2						2		1	5
Overcome by afterdamp, blackdamp, or firedamp.....													
Run over or crushed by cars, locomotives and runaway trips.....				1								2	3
Struck by falling timber.....	11	5	7	2	6	10	3	5	3	1	2	5	60
Struck by coal in chutes or bins.....		1	2									2	5
Suffocated by coal in chutes.....				2	1	1		1	2		1	1	3
Suffocated by powder smoke.....		4		2					1				11
Other causes.....				2					1	1	1	1	6
Unknown causes.....													
Outside accidents.....	1	3	1	3		5			1	3	2	3	28
Inside accidents.....	21	34	24	31	42	22	14	23	16	42	19	27	314
Total inside and outside accidents.....	22	37	25	39	43	27	14	22	17	45	21	30	342
Number of inside employees.....	3,929	4,865	4,270	4,420	4,633	4,398	4,362	4,711	4,383	3,683	3,566	4,038	4,366
Number of inside and outside employees.....	5,227	6,113	5,341	5,725	6,121	5,761	5,673	6,005	5,647	4,828	4,746	5,345	5,586
Men inside killed per 1,000 employed.....	5.34	7.00	5.62	7.01	8.97	5.00	3.21	4.67	3.65	11.40	5.28	6.65	6.11
Total inside and outside men killed per 1,000 employed.....	4.21	6.05	4.68	6.81	7.03	4.67	2.46	3.62	3.01	9.32	4.42	5.61	5.13
Tons coal mined per life lost (inside and outside).....	149,590	100,005	119,039	92,087	92,548	131,419	239,003	174,105	178,845	53,540	143,700	133,425	118,898

RECAPITULATION OF NON-FATAL ACCIDENTS, CAUSE OF INJURY, NATURE OF INJURY, PERCENTAGE OF INJURIES, AND TIME LOST, 1917.—Concluded.

CAUSE OF INJURY	NUMBER INJURED			TIME LOST-- DAYS		Per-centage of In-juries	NATURE OF INJURY	NUMBER INJURED			TIME LOST-- DAYS		Per-centage of In-juries
	In-side	Out-side	Total	Re-turned to Work	Total			Average	Men Returned to Work	Total	Average		
Trolley wire, live.....	4	.....	4	4	77	19.25	Hand cut	23	23	234	13.41	2.51	
Wire of cable.....	5	.....	5	5	43	8.60	Hand infected	11	11	80	9.50	1.30	
							Hand injured	13	1	1134	10.32	1.58	
							Hand punctured	5	5	41	8.30	0.55	
							Hands and ace burned						
							Head bruised	20	20	3224	17.92	2.18	
							Head cut	9	9	3474	43.44	0.98	
							Head cut	31	31	3734	14.37	3.30	
							Hernia	2	3	184	46.00	0.55	
							Hip bruised	15	4	179	17.90	2.07	
							Internal injury	4	4	225	112.50	0.44	
							Knee bruised	15	15	2254	15.06	1.54	
							Knee injured	15	16	391	30.06	1.76	
							Knee wrenched	1	2	56	15.06	0.33	
							Leg broken	10	3	1	508	186.03	1.42
							Leg bruised	34	3	775	23.48	4.04	
							Leg cut	6	7	65	13.00	0.76	
							Leg injured	21	2	375	30.83	2.51	
							Neck bruised	3	3	68	22.67	0.33	
							Nose broken	2	2	97	46.50	0.22	
							Nose injured	1	1	164	16.80	0.11	
							Pelvis bone broken	1	1	125	125.00	0.11	
							Ribs bruised	4	4	94	23.62	0.44	
							Ribs broken	14	2	3734	28.93	1.75	
							Shoulder injured	13	13	1964	15.34	1.42	
							Shoulder sprained	6	1	76	15.30	0.76	
							Side bruised	12	12	225	20.45	1.51	
							Side injured	9	13	1664	18.90	1.42	
							Thigh bruised	8	9	102	12.75	0.87	
							Thigh bruised	5	9	1894	19.94	0.98	
							Thumb cut	20	1	2174	12.79	2.59	
							Toes bruised	5	4	172	19.11	0.96	
							Toes broken	1	2	664	16.86	0.33	
							Toes cut	2	2	25	12.50	0.22	
							Wrist injured	6	7	35	5.63	0.76	
							Wrist sprained	10	1	944	9.45	1.50	
Totals.....	822	94	916	778	16,800	21.60	Totals	916	916	16,800	21.60	100.00	

RECAPITULATION OF NON-FATAL ACCIDENTS, 1917.

Residence	Num- ber In- jured	Nationality	Num- ber In- jured	Occupation	NUMBER INJURED		Name of Mine	NUMBER INJURED			Time Lost of Injured Returned to Work
					Inside	Outside		Inside	Outside	Inside and Outside	
Bayne.....	26	American...	152	Blacksmith.....	4	4	Bayne	23	3	26	385 1/2
Black Diamond	86	Austrian.....	175	Bucker.....	4	4	Burnett	59	12	71	971
Buckley.....	14	Belgian.....	6	Cager.....	6	3	Carbonado, outside	15	15	30	378
Burnett.....	51	Bohemian...	3	Carpenter.....	3	3	Carbonado, Wingate	14	14	28	135 1/2
Carbonado.....	81	Bulgarian...	2	Car repaler.....	2	2	Carbonado, Douty	14	14	28	695 1/2
Chehalla.....	5	Canadian...	2	Chute starter.....	1	1	Carbonado, Electric slope	3	3	6	57
Cle Elum.....	114	Croatian...	5	Coupler.....	2	2	Carbonado, No. 6 (old)	4	4	8	57
Cokedale.....	3	Croatian...	1	Driver.....	17	1	Carbonado, No. 6 (old 9)	10	2	12	104 1/2
Cumberland.....	15	Dane.....	2	Dumper.....	3	3	Carbonado, Miller	11	11	22	130 1/2
Durham.....	13	English.....	82	Electrician.....	1	1	Carbonado, No. 10 (old 5)	8	8	16	184
Fairfax.....	11	Fin.....	48	Engineer.....	1	1	Cokedale	12	2	14	7 1/2
Franklin.....	3	French.....	48	Fireboss.....	5	4	Durham	10	1	11	84 1/2
Isaquah.....	19	German.....	16	Foreman.....	4	4	Fairfax	60	9	69	1,100
Ladd.....	2	Greek.....	3	Foreman.....	66	48	Ford	5	1	6	148 1/2
Melmont.....	5	Hungarian...	1	Laborer.....	9	1	Gale Creek	11	2	13	212
Mineral.....	4	Irish.....	3	Loader.....	1	1	Grand Ridge	5	1	6	220
Melmont.....	69	Italian.....	121	Machine man.....	2	3	Hyde	20	6	26	615
New Castle.....	11	Mexican.....	2	Machine man.....	694	1	Independent	6	6	12	89
Palmer.....	65	Montenegro	3	Mine foreman.....	13	1	Isaquah	4	4	8	78
Ravensdale.....	1	Lithuanian	2	Miner.....	1	1	Ladd	13	1	14	54
Renton.....	39	Negro.....	9	Motorman.....	4	4	Melmont	2	2	4	382 1/2
Ronald.....	209	Norwegian..	1	Pumpman.....	1	1	National No. 6	49	2	51	945 1/2
Roslyn.....	1	Pole.....	19	Pusher.....	4	4	Northwestern Imp. Co., No. 3	53	5	58	868
Selleck.....	4	Russian.....	15	Rock picker.....	9	1	Northwestern Imp. Co., No. 5	51	3	54	973
South Prairie.....	9	Scott.....	9	Rope rider.....	2	2	Northwestern Imp. Co., No. 6	66	1	67	1,110
Taylor.....	33	Slav.....	11	Screener.....	17	2	Northwestern Imp. Co., No. 7	3	3	6	44
Tono.....	1	Swede.....	15	Shot lighter.....	26	1	Northwestern Imp. Co., No. 8	21	1	22	504
Wilkeson.....	241	Welsh.....	15	Surveyor.....	1	1	Northwestern Imp. Co., Ole Elum	7	1	8	290 1/2
Black Eng- lish (No nativity given).		Timberman.....	26	Switcher.....	21	1	Pacific Coast Coal Co., No. 11	5	1	6	146
		Timberman helper.....	1	Timberman.....	6	6	Pacific Coast Coal Co., Cannon	10	10	20	1,307 1/2
		Timber packer.....	21	Tracklayer.....	6	6	Pocahontas	10	10	20	108

RECAPITULATION OF NON-FATAL ACCIDENTS, 1917.—Concluded.

Residence	Num- ber In- jured	Nationality	Num- ber In- jured	Occupation	NUMBER INJURED			Name of Mine	NUMBER INJURED			Time Lost of Injured and Returned to Work
					Inside	Outside	Inside and Outside		Inside	Outside	Inside and Outside	
				Tracklayer				Renton	62	2	64	1,063
				Helper				Roslyn Ore Elevator		10	10	245
				Trip rider	1		1	Roslyn Cascade Coal Co., No. 1	13		13	526
				Washer		2	2	Roslyn Cascade Coal Co., No. 2	14		14	167
				Weighman		1	1	Roslyn Coal & Coke Co., Plant		1	1	156
								Roslyn Fuel Co., No. 1	11		11	243
								Roslyn Fuel Co., No. 2	29		29	492
								Roslyn Fuel Co., Summit	4		4	87
								South Willis		3	3	122
								Superior	4		4	119
								Taylor	7		7	51
								Tono	8		8	181
								Wilkeson Mines	18		18	297
								Wright	1		1	166
Total.....	916	Total....	916	Totals.....	822	94	916	Totals.....	822	94	916	16,806

* Not assignable to any one mine, Northwestern Improvement Company.

**NUMBER OF NON-FATAL ACCIDENTS, BY LEADING CAUSES, FOR THE
YEARS 1912-1917.**

CAUSES	YEAR					
	1912	1913	1914	1915	1916	1917
Axe	14	29	40	22	38	41
Coal	13	13	16	14	18	36
Coal or rock coming down chute	28	10	10	10	24	.....
Coal, flying	15	44	55	61	82	60
Engine, hoisting (steam or electric) .....	.....	.....	1	2	2	.....
Explosion of gas or dust	26	41	30	29	28	20
Explosion of powder, caps, etc.	4	.....	4	.....	1	.....
Fall of coal	72	67	80	78	91	111
Fall of rock, clay clod, roof, etc.	114	158	209	141	191	177
Fall down chute or shaft	8	10	2	8	8	17
Fell	40	47	42	12	40	21
Jumping off cars .....	.....	8	2	2	8	4
Lifting	9	30	31	33	44	25
Locomotive, haulage	4	7	13	7	9	8
Machinery and caught by same .....	.....	10	7	12	8	13
Mine cars	31	126	107	83	139	157
Mining machines, drills, etc. ....	.....	2	.....	8	7	.....
Mules .....	.....	7	.....	5	8	10
Nail	3	8	8	11	13	15
Pick	4	8	14	12	16	19
Pulley wheels	13	6	2	3	8	8
Pushing car .....	.....	4	8	5	14	5
Rock .....	.....	14	12	13	17	6
Ropes and wire from same .....	.....	7	14	11	21	15
Slipped and fell .....	.....	7	11	60	43	31
Struck by rock or coal from shots, windy shots	3	1	5	1	5	5
Timber, struck by, etc.	12	44	56	41	85	60
Tools	6	22	10	15	32	26
Trolley wire, live	1	3	4	3	3	4
Other causes	31	27	31	14	37	22
Outside accidents .....	.....	.....	.....	82	118	94
Inside accidents .....	.....	.....	.....	624	917	822
Total accidents	455	773	831	706	1,035	916
Time lost-days, men returned to work ..	.....	.....	20,538	18,184	20,274	16,806
Average time lost-days, per accident ..	.....	.....	26.33	26.05	23.19	21.60
Tons mined per accident, inside .....	.....	.....	.....	3,361	3,293	4,870
Tons mined per accident, outside .....	.....	.....	.....	29,332	25,500	42,563
Tons mined per non-fatal accident .....	.....	.....	.....	3,413	2,913	4,370
Average days operated	7,356	4,956	3,650	3,413	2,913	4,370
Inside employees	225	251	200	166	218	271
Outside employees	4,362	4,711	4,338	3,633	3,596	4,068
Total employees	1,311	1,354	1,264	1,145	1,150	1,237
Total number employees	5,673	6,065	5,647	4,825	4,746	5,345
Number injured per 1,000 employees	80.2	127.4	147.4	146.2	218.1	171.3

PERCENTAGES OF NON-FATAL ACCIDENTS, FOR THE YEARS 1912-1917, BY LEADING CAUSES.

CAUSES	YEAR					
	1912	1913	1914	1915	1916	1917
Axe	3.1	3.8	4.8	3.1	3.7	4.68
Coal .....	.....	1.7	1.9	2.0	1.7	3.98
Coal or rock coming down chute.....	.....	3.6	1.2	1.4	2.3	.....
Coal, flying	3.3	5.7	6.6	8.6	7.9	6.55
Engine, hoisting (steam or electric).....	.....	.....	0.1	0.3	0.2	.....
Explosion of gas or dust.....	5.7	5.3	3.6	4.1	2.7	2.18
Explosion of powder, caps, etc.....	0.9	.....	0.5	.....	0.1	.....
Fall of coal.....	15.8	8.7	9.6	11.1	8.8	12.11
Fall of rock, clay clod, etc.....	25.0	20.4	25.1	20.0	18.4	19.32
Falling down chute or shaft.....	0.7	1.3	0.3	0.4	0.8	1.86
Fell	8.8	6.1	5.1	1.7	3.9	2.29
Jumping off cars.....	.....	0.4	0.3	0.3	0.8	0.44
Lifting	2.0	3.9	3.7	4.7	4.2	2.73
Locomotives, haulage	0.9	0.9	1.6	1.0	0.9	0.88
Machinery and caught by same.....	.....	1.3	0.8	1.7	0.8	1.42
Mine cars	17.8	16.3	12.9	11.8	13.4	17.14
Mining machines, drills, etc.....	.....	0.3	.....	0.4	0.7	.....
Mules .....	.....	0.9	0.8	0.7	0.8	1.09
Nail	0.7	1.0	1.0	1.6	1.2	1.64
Pick	0.9	1.0	1.6	1.7	1.5	2.07
Pulley wheels	2.8	0.8	0.3	0.4	0.3	0.87
Pushing car .....	.....	0.5	1.0	0.7	1.4	0.55
Rock .....	.....	1.3	1.5	1.8	1.6	0.65
Ropes and wire from same.....	.....	0.9	1.6	1.6	2.0	1.64
Slipped and fell.....	.....	0.9	1.3	3.5	4.2	3.38
Struck by rock or coal from shots, windy shots	0.7	0.1	0.6	0.1	0.5	0.55
Timber, struck by, etc.....	2.6	5.7	6.8	5.8	3.2	6.55
Tools	1.3	2.3	1.2	2.1	3.1	2.84
Trolley wire, live.....	0.2	0.4	0.5	0.4	0.3	0.44
Other causes	6.8	3.5	3.7	2.0	3.6	2.41
Outside accidents .....	.....	.....	.....	11.6	11.4	10.26
Inside accidents .....	.....	.....	.....	88.4	88.6	89.74
Total accidents	100.0	100.0	100.0	100.0	100.0	100.00

NAME OF COMPANY AND OFFICE ADDRESS	Name of Mine	Manager	Superintendent	Mining Engineer	Mine Foreman	Postoffice Address of Mine
KING COUNTY—						
Andrew Kennedy, Coleman Bldg., Seattle, Wash.	Grand Ridge.	Andrew Kennedy.	L. J. Harris.	H. L. Hawkins.	John Reynolds.	Issaquah
Black River Coal Co., Earlington, Wash.	Black River.	D. S. Handley.	R. B. Heafan.	H. L. Handley.	Joe Foster.	Earlington
Carbon Coal & Clay Co., Bayne, Wash.	Carbon-Daly.	J. F. Keenan.	H. L. Handley.	J. Edw. Bergin.	Chas. Wilson.	Bayne
Denny-Renton Clay & Coal Co., Hoge Bldg., Seattle, Wash.	No. 1 Shaft.	J. F. Keenan.	J. Edw. Bergin.	J. Edw. Bergin.	Ward Harris.	Taylor.
Denny-Renton Clay & Coal Co., Hoge Bldg., Seattle, Wash.	Brick yard.	J. F. Keenan.	J. E. Kendtner.			Renton
Durham Colliery Co., Tacoma Bldg., Tacoma.	No. 1 and 2.	C. A. Foster.	C. E. Jones.	F. E. Black.	Robt. Simpson.	Durham
Hyde Coal Company, Cumberland, Wash.	Hyde.	Philip Rowe.	Samuel Hyde.	John Williams.	E. J. Jones.	Cumberland
National Coal Company, Cumberland, Wash.	No. 6.	A. C. Dennis.	Geo. Stonebridge.	G. L. Cumline.		Durham
Northwestern Imp. Co., N. P. Bldg., Tacoma.	Hiawatha.	C. C. Andersen.	Wm. R. Reese.	D. R. Swen.	Jacob Andrias.	Cumberland
Oeark Coal Mining Co., Cumberland, Wash.	Navy.	Geo. W. Sheatsley.	James D. Davis.	John Williams.		Cumberland
Pacific Coast Coal Company, Seattle.	No. 11.	William Hann.	R. Christensen.	Ray Smith.	Ben Allen.	Blk. Diamond
Pacific Coast Coal Company, Seattle.	Ford.	William Hann.	J. J. Jones.	Ray Smith.	Fred Landstrom.	New Castle
Pacific Coast Coal Company, Seattle.	Cannon.	William Hann.	R. Christensen.	Ray Smith.	John Dandelson.	New Castle
Pacific Coast Coal Company, Seattle.	Issaquah.	William Hann.	J. J. Jones.	Ray Smith.	Geo. Clark.	Franklin
Pacific Coast Coal Company, Seattle.	Renton.	William Hann.	L. D. Jones.	Ray Smith.	John Morgan.	Issaquah
Pocahontas Coal & Coke Co., Palmer, Wash.	Pocahontas.	J. R. Miller.	D. P. Davies.	Ray Smith.	W. A. Lewis.	Renton
						Palmer
KITTSAS COUNTY—						
Independent Coal & Coke Co., White Bldg., Seattle	Miller.	O. E. Jones.	Robt. Scoble.	Fred Blanco.	Richard Prescott.	Cle Elum
Northwestern Imp. Co., N. P. Bldg., Tacoma.	No. 6.	C. C. Andersen.	Peter Bagley.	D. R. Swen.	Geo. Morris.	Roslyn
Northwestern Imp. Co., N. P. Bldg., Tacoma.	No. 3.	C. C. Andersen.	Peter Bagley.	D. R. Swen.	Thos. Ramsay.	Roslyn
Northwestern Imp. Co., N. P. Bldg., Tacoma.	No. 5.	C. C. Andersen.	Peter Bagley.	D. R. Swen.	Ed. Richards.	Roslyn
Northwestern Imp. Co., N. P. Bldg., Tacoma.	No. 7.	C. C. Andersen.	Peter Bagley.	D. R. Swen.	J. H. Pascoe.	Cle Elum
Northwestern Imp. Co., N. P. Bldg., Tacoma.	No. 8.	C. C. Andersen.	Peter Bagley.	D. R. Swen.	Geo. Rorsythe.	Roslyn
Northwestern Imp. Co., N. P. Bldg., Tacoma.	Cle Elum.	C. C. Andersen.	Peter Bagley.	D. R. Swen.	Fred Smith.	Cle Elum
Roslyn Cascade Coal Company, Roslyn, Wash.	No. 1 and 2.	William Mackay.		J. E. Ash.	Robt. Scoble, Sr.	Roslyn
					James Ash.	Roslyn
Roslyn Coal & Coke Company, Roslyn, Wash.	Plant.	A. F. Plant.	Wm. Shaw.	Fred Blanco.	Wm. Moses.	Roslyn
Roslyn Fuel Company, White Bldg., Seattle.	No. 1.	C. E. Jones.	Wm. Shaw.	Fred Blanco.	Thos. Miller.	Roslyn
Roslyn Fuel Company, White Bldg., Seattle.	No. 2.	C. E. Jones.	Wm. Shaw.	Fred Blanco.	D. S. Bowle.	Roslyn
Roslyn Fuel Company, White Bldg., Seattle.	No. 3.	C. E. Jones.	Wm. Shaw.	Fred Blanco.	W. J. Evans.	Roslyn
Roslyn Fuel Company, White Bldg., Seattle.	Summit.	C. E. Jones.	Robt. Scoble, Jr.	Fred Blanco.	Wm. Galloway.	Cle Elum
Roslyn Fuel Company, White Bldg., Seattle.	Wright.	C. E. Jones.	Wm. Shaw.	Fred Blanco.	Harry Taylor.	Roslyn

OPERATING COMPANIES WITH NAMES OF MANAGERS, SUPERINTENDENTS, MINING ENGINEERS AND MINE FOREMEN FOR THE YEAR 1917.—Concluded.

NAME OF COMPANY AND OFFICE ADDRESS	Name of Mine	Manager	Superintendent	Mining Engineer	Mine Foreman	Postoffice Address of Mine
LEWIS COUNTY—						
Arnew Fuel Company, Centralia, Wash.....	Monarch.....	Jay Agnew.....	Ed. Morgan.....	.....	J. G. Parkin.....	Koplah
Centralia Coal Mining Co., Centralia, Wash.....	Empress.....	A. D. Roron.....	John Hutchinson.....	.....	W. Noako.....	Centralia
Ford's Prairie Coal Company, Centralia, Wash.....	Ford's Prairie.....	B. H. Johnston.....	D. W. Watkins.....	T. E. Martin.....	P. Pergolice.....	Mendota
Mendota Coal & Coke Co., Centralia, Wash.....	No. 1.....	R. P. Damascus.....	D. W. Watkins.....	R. P. Tarr.....	Dan Davies.....	Centralia
Olympia Coal & Mining Co., Centralia, Wash.....	Packwood.....	E. T. Felt.....	.....	.....	.....	Mineral
Princeton Coal Co., Fidelity Bldg., Tacoma.....	Ladd.....	Marian Howell.....	Den Murphy.....	.....	Den Murphy.....	Centralia
Sheldon Coal Company, Centralia, Wash.....	Sheldon.....	W. F. West.....	T. K. Campbell.....	.....	W. B. Graham.....	Chenails
Superior Coal Company, Chenails, Wash.....	No. 2.....	T. K. Campbell.....	.....	.....	.....	Chenails
PIERCE COUNTY—						
Carbon Hill Coal Company, Carbonado, Wash.....	Melmont.....	J. F. Menzies.....	Frank Good.....	John Harvey.....	H. Bollinger.....	Carbonado
Carbon Hill Coal Company, Carbonado, Wash.....	Wingate.....	J. F. Menzies.....	Frank Good.....	John Harvey.....	D. E. Roberts.....	Carbonado
Carbon Hill Coal Company, Carbonado, Wash.....	Miller.....	J. F. Menzies.....	Frank Good.....	John Harvey.....	Mark Bowers.....	Carbonado
Carbon Hill Coal Company, Carbonado, Wash.....	Nos. 6 and 10.....	J. F. Menzies.....	Frank Good.....	John Harvey.....	Ed. Husband.....	Carbonado
Carbon Hill Coal Company, Carbonado, Wash.....	Douty.....	J. F. Menzies.....	Frank Good.....	John Harvey.....	L. Nightingale.....	Carbonado
Fairfax Mine Inc., Tacoma, Wash.....	Fairfax.....	W. R. Rust.....	J. R. Patzer.....	Harry Boyle.....	Stanley Smith.....	Fairfax
Gale Creek Coal Mines, Co., Wilkeson, Wash.....	Gale Creek.....	Henry Hewitt, Jr.....	J. T. Lee.....	C. L. White.....	Robt. Cox.....	Wilkeson
Pacific Coast Coal Company, Seattle, Wash.....	Burnett.....	Wm. Hann.....	Griff Llewellyn.....	Ray Smith.....	Art. Jones.....	Burnett
South Willis Coal Co., Spicketon, Wash.....	Nos. 7, 8, 9, 1.....	Abe Morris.....	Frank Merritt.....	F. J. Dorthra.....	Eric Jackson.....	Spicketon
Wilkeson Coal & Coke Co., Wilkeson, Wash.....	Wilkeson.....	Henry Hewitt, Jr.....	J. T. Lee.....	C. L. White.....	J. J. Corey.....	Wilkeson
SEKAGIT COUNTY—						
Cokedale Coal Company, Sedro Woolley, Wash.....	Cokedale.....	F. A. Hill.....	F. A. Hill, Jr.....	.....	J. H. Davis.....	Sedro Woolley
THURSTON COUNTY—						
Richmond Coal Company, Bucoda, Wash.....	Richmond.....	John Richmond.....	E. S. Brooks.....	.....	John Richmond.....	Bucoda
Washington Union Coal Co., Tono, Wash.....	Tono No. 1.....	.....	.....	R. B. Ober.....	Chas. Friend.....	Tono
WHATCOM COUNTY—						
Whatcom County Coal Company, R. F. D. No. 3, Bellingham, Wash.....	Blue Oanyon.....	.....	Andrew Eckland.....	.....	Andrew Eckland.....	Route No. 3, Bellingham

TABLE SHOWING NAMES OF COMPANIES, POSTOFFICE ADDRESS, SHIPPING FACILITIES AND PRINCIPAL MARKET.

List of Operating Companies	Postoffice Address	Shipping Facilities	Principal Market
Andrew Kennedy	Coleman Bldg., Seattle, Wash.	Northern Pacific Railway	Washington and California
Agnaw Fuel Company	Centralia, Washington	Eastern Railroad & Lumber Company	Washington and Oregon
Carbon Coal & Clay Company	Bayne, Washington	N. P. Ry. and O. M. & St. P. Ry.	Washington
Carbon Hill Coal Company	Carbonado, Washington	Northern Pacific Railway	Washington and Oregon
Centralia Coal Mining Company	Centralia, Washington	Eastern Railroad & Lumber Company	Washington
Cokedale Coal Company	Sedro Woodley, Washington	Great Northern Railway	Factory use
Denny-Benton Clay & Coal Company	Hoge Bldg., Seattle, Wash.	Pacific Coast Railway	Washington
Durham Colliery Company	Tacoma Bldg., Tacoma, Wash.	N. P. Ry. and O. M. & St. P. Ry.	Washington
Ford's Prairie Coal Company	Centralia, Washington	N. P. Ry. and P. S. & W. H. R. R.	Washington
Gale Creek Coal Mines Company	Tacoma, Washington	Northern Pacific Railway	Washington and Oregon
Hyde Coal Company	Seattle, Washington	Northern Pacific Railway	Washington, Oregon and Idaho
Independent Coal & Coke Company	White Bldg., Seattle, Wash.	Northern Pacific Railway	Washington and Oregon
Mendota Coal & Coke Company	Centralia, Washington	N. P. Ry. and O. M. & St. P. Ry.	Washington
National Coal Company	Henry Bldg., Seattle, Wash.	Northern Pacific Railway	Northern Pacific Railway
Northwestern Improvement Company	N. P. Bldg., Tacoma, Wash.	Northern Pacific Railway	Washington
Olympia Coal and Mining Company	Centralia, Washington	N. P. Ry. and O. M. & St. P. Ry.	Washington
Quark Coal Mining Company	Cumberland, Washington	N. P. Ry. and P. C. Ry.	Washington, Oregon and California
Pacific Coast Coal Company	77 Washington St., Seattle.	N. P. Ry. and P. C. Ry.	Washington
Phoenix Coal Company	Tacoma, Washington	Tacoma Eastern R. R.	Washington
Puechontas Coal & Coke Company	Palmer, Washington	Northern Pacific Railway	Puget Sound Cities
Puget Sound Traction, Light & Power Co.	Seattle, Washington	P. S. E. R. R. and N. P. Ry.	Washington
Richmond Coal Company	Bucode, Washington	Northern Pacific Railway	Eastern Washington
Roslyn Cascade Coal Company	Roslyn, Washington	Northern Pacific Railway	Washington
Roslyn Coal & Coke Company	Roslyn, Washington	Northern Pacific Railway	Washington
Roslyn Fuel Company	White Bldg., Seattle, Wash.	Northern Pacific Railway	Washington, Oregon and Idaho
Saber Valley Coal Company	Centralia, Washington	By teams	Idaho
Sheldon Coal Company	Chehalis, Washington	Twin City Light & Power Company	Local
Superior Coal Company	Chehalis, Washington	Northern Pacific Railway	Portland, Oregon
South Willis Coal Company	Spiketon, Washington	Northern Pacific Railway	Washington
The Fairfax Mine, Incorporated	Tacoma, Washington	Northern Pacific Railway	Tacoma Smelter
Washington Union Coal Company	Tono, Washington	Oregon-Washington R. R. & N.	Washington and Oregon
Whatcom County Coal Company	R. F. D. No. 3, Bellingham	Northern Pacific Railway	Washington
Wilkeson Coal & Coke Company	Tacoma, Washington	Northern Pacific Railway	Washington

**NAME, ADDRESS AND NUMBER OF CERTIFICATE OF THOSE WHO PASSED
EXAMINATIONS, 1917.**

FIRST CLASS			SECOND CLASS		
Name	Address	No. of Certificate	Name	Address	No. of Certificate
Paul Gallagher	Black Diamond.	1	J. S. Murphy.....	Black Diamond.	1
M. A. Morgan.....	Black Diamond.	2	George Elner	Issaquah.....	2
John F. Danielson.....	New Castle.....	3	Richard Mitchell	Black Diamond.	3
John Parker	Issaquah.....	4	Thomas Choyce	Cle Elum.....	4
Joseph Foster	Bayne.....	5	Wm. Clarke	Cle Elum.....	5
H. L. Handley	Bayne.....	6	Geo. Cormie	Cle Elum.....	6
Joseph McDonald	Black Diamond.	7	E. J. McGilley.....	Cle Elum.....	7
James Ash	Roslyn.....	8	James Fisher	Cle Elum.....	8
W. J. Evans.....	Roslyn.....	9	Joseph W. Parker.....	Cle Elum.....	9
C. F. Smith.....	Cle Elum.....	10	John Heathcock	Roslyn.....	10
Wm. Spears	Roslyn.....	11	Wm. H. Evans.....	Burnett.....	11
Rudolph Werberger	Roslyn.....	12	J. B. Brady.....	Burnett.....	12
Henry Taylor	Roslyn.....	13	Robert Thomas	Issaquah.....	13
Fred Bianco	Roslyn.....	14	Stanley Smith	Fairfax.....	14
J. H. Pascoe.....	Cle Elum.....	15	Theo E. Rouse.....	New Castle.....	15
Ralph Mayer	Roslyn.....	16	D. J. Thomas.....	Wilkeson.....	16
John Morgan	Roslyn.....	17	Mike Smiseck	Black Diamond.	17
J. T. Tonge.....	Roslyn.....	18	Richard Marsden	Wilkeson.....	18
I. Greenhalgh	Roslyn.....	19	Arvid Swanson	Black Diamond.	19
A. R. Norris.....	Roslyn.....	20	Fred Pontin	Black Diamond.	20
James E. Ash.....	Roslyn.....	21	John Howells	Black Diamond.	21
Thomas McKean	Roslyn.....	22	Thomas John Rees.....	Renton.....	22
Matt Boose	Roslyn.....	23	Harry J. DeWinter.....	Taylor.....	23
Thomas Hale	Roslyn.....	24	Lou McDonald.....	Black Diamond.	24
John C. Graham.....	Roslyn.....	25	Matt Mohar	Roslyn.....	25
Thos. Ramsay	Roslyn.....	26	Dan Shields	Cle Elum.....	26
E. G. Richards	Roslyn.....	27	James M. Boose.....	Roslyn.....	27
George Morris	Roslyn.....	28	Matt Hind	Cle Elum.....	28
Thomas Finley	Tono.....	29	Cuthbert Charles Nunn.....	Cle Elum.....	29
Mark Bowers	Carbonado.....	30	Horace Davis	Burnett.....	30
Wm. H. Evans.....	Burnett.....	31	J. Thomas Woolley.....	Roslyn.....	31
Edwin Husband	Carbonado.....	32	Harry Irwin	Franklin.....	32
James D. Davies.....	Cumberland.....	33	T. W. Downing.....	Carbonado.....	33
Richard Williams	Carbonado.....	34	Ernest J. Lindman.....	Carbonado.....	34
Wm. Lewis	Wilkeson.....	35	John McDonald.....	Carbonado.....	35
Owen Roberts	Carbonado.....	36	.....	.....	.....
Chas. B. White.....	Carbonado.....	37	.....	.....	.....
Daniel Davies	Carbonado.....	38	.....	.....	.....
J. Edw. Bergin.....	Burnett.....	39	.....	.....	.....
G. E. Rockefeller	Fairfax.....	40	.....	.....	.....
Manchester Walters	Renton.....	41	.....	.....	.....
John J. Corey.....	Wilkeson.....	42	.....	.....	.....
George Savage	Fairfax.....	43	.....	.....	.....
Henry J. DeWinter.....	Taylor.....	44			
D. P. Davies.....	Buckley.....	45			
Robt. Thompson	Roslyn.....	46			
W. L. Wallace.....	Roslyn.....	47			
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Bulletin 10.—The Coal Fields of Pierce County, by Joseph Daniels. Bound in cloth, price 60 cents; paper cover, price 40 cents.

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OTHERS.

Tenth Census of the United States, Volume XV.

STATE OF WASHINGTON

Annual Report of Coal Mines

FOR THE

Year Ending December 31, 1918

JAMES BAGLEY,
State Mine Inspector
SEATTLE



OLYMPIA,
FRANK M. LAMBORN  PUBLIC PRINTER
1919

PERSONNEL OF THE STATE MINE INSPECTION DEPARTMENT.

JAMES BAGLEY.....*State Mine Inspector*
SIMON H. ASH.....*Deputy Mine Inspector*

BOARD OF EXAMINERS.

B. H. JOHNSTON, *President*.....*Centralia*
PETER BOOSE.....*Black Diamond*
D. R. SWEM.....*Tacoma*
JAMES BAGLEY, *Secretary*.....*Seattle*

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LETTER OF TRANSMITTAL.

**OFFICE OF THE STATE MINE INSPECTOR,
SEATTLE, WASHINGTON.**

To His Excellency Ernest Lister, Governor of Washington.

SIR: In compliance with section 10 of an act relating to and regulating the operations of coal mining, which became effective June 7, 1917, I have the honor to submit herewith the Annual Report of Coal Mines for the year ending December 31st, 1918.

Respectfully submitted.

JAMES BAGLEY,
State Inspector of Coal Mines.

April 1, 1919.

INTRODUCTION AND REVIEW.

The coal production for 1918 was 4,128,424 short tons, an increase of 125,665 tons over the previous year and is the largest production the State has yet had. A comparative statement showing the increase or decrease, by counties, over 1917, follows:

<i>County.</i>	<i>1918</i>	<i>1917</i>	<i>Increase or Decrease.</i>
King	1,331,601	1,314,366	+ 17,235
Kittitas	1,739,379	1,741,237	— 1,858
Lewis	174,621	130,578	+ 44,043
Pierce	600,917	606,049	— 5,132
Skagit	5,897	1,000	+ 4,897
Thurston	271,406	204,688	+ 66,718
Whatcom	4,603	4,841	— 238
Totals.....	4,128,424	4,002,759	+ 125,665

Thurston and Lewis counties show the largest increase for the year. About 53% of the increase tonnage, of the State, was mined at the Tono mine in Thurston county, operated by the Washington Union Coal Company. The maximum production, in the State, was recorded in the month of August when there was 137,343 days of labor performed, an average of 5,430 men working 25.3 days and producing 382,160 tons for the month.

The average value per ton at the mine was \$3.53 as compared with \$2.84 in 1917. Total value at the mine was \$14,564,445.

The coke output for the State, for 1918, was 144,349 tons, an increase of 21,577 tons over 1917; 93,699 tons were manufactured at the mines at Carbonado, Fairfax and Wilkeson in Pierce county. The Seattle Lighting Company manufactured 50,650 tons at their plant at Seattle, 20,522 tons of which was bench coke. The average value of the coke per ton was \$8.97. Total value, \$1,295,258.

There was employed during the year in and about the coal mines of the State 5,847 employes, 4,172 inside and 1,675 outside. This is an increase of 502 employes over 1917. The mines were operated 266 days compared with 271 during 1917.

Seventy-two mines and openings of all kinds operated during the year, an increase of nine over 1917.

The production for the year would have been considerably increased had there been a uniform demand for it throughout the year.

During the last two months of the year, or following the signing of the armistice terms a number of mines were idle part of the time on account of no orders. This was due, in part, to a falling off in the demand for domestic fuel on account of the mild winter and the fact that a great many of the domestic consumers had stored their fuel in the summer and fall months as advised by the State Fuel Administrator. Among the problems that confront the Washington coal operator in competing for business with the surrounding districts and fuel oil are the high cost of mining and how to find a market for the smaller grades of coal produced at the mines. In

some of the districts, especially King and Pierce counties, where the coal is mined on the heavy pitches the proportion of slack and pea in some cases runs as high as 50 per cent of the output, causing the market to be supplied with a surplus of those grades of coal which must be sold at a reduced price. While the price received for the larger sizes of Washington coal may seem high the average price received by the coal operator for the entire output leaves him only a small margin above the operating cost which is probably the highest in the United States. During the months of November and December 1917 a commission, appointed by the State Fuel Administration, assisted by a representative of the Federal Trade Commission, made an investigation of the operating cost at the coal mines of the State with the object in view of adjusting the price of coal at the mines as then allowed by the Federal Fuel Administration. After a careful investigation into the cost of mining in the State their recommendations were submitted to the State Fuel Administration who forwarded them to the Federal Fuel Administrator at Washington, D. C. On the data submitted by this board the price was raised on prepared sizes at nearly every mine in the State.

To find a market for the smaller sizes of coal the Pacific Coast Coal Company, some years ago, installed a briquet plant near their mines which produces a briquet from this coal which is widely used on the commercial market. During the past two years this company has developed the use of powdered fuel to the extent that during the last year some of the largest office buildings in the city of Seattle have installed equipment to use powdered coal, claiming it was cheaper than fuel oil at the present price and eliminating, to a great extent, the smoke nuisance attendant upon coal and oil as ordinarily used.

The coal industry of Washington should be fostered and encouraged by the people of the State especially the business men in the cities of Seattle and Tacoma who derive a direct benefit from the large pay rolls distributed at the mines.

GOVERNMENT REGULATIONS.

The Government regulations, regarding the price and handling of coal, which were adopted in the fall of 1917, were in effect throughout the year. In the month of March 1918, David Whitcomb, State Fuel Administrator, was appointed executive secretary to the Federal Fuel Administrator at Washington, D. C. Winlock W. Miller was then appointed State Fuel Administrator and served in that capacity until the federal regulations were discontinued. In April 1918, D. C. Botting was appointed District Representative, for the Federal Fuel Administrator in charge of production and distribution of coal in this State and was in charge of the regulations concerning the cleaning and preparation of coal at the mines.

Many of the coal operators resented the federal regulation when first adopted, due to the price set by the Government being made uniform throughout the State and had not taken into consideration the cost of mining in the different districts which vary greatly. When the price was adjusted to suit the different conditions the regulations worked to the advantage of all and there is no doubt that the consumer would have paid more for fuel if the Government regulations had not prevailed.

The following prices were in effect, when the federal regulations were discontinued:

Screened Coals.

BITUMINOUS—

District No. 1: Kittitas County—

Run of mine.....	\$3 45
Prepared sizes—	
Lump and egg.....	3 85
Special steam and gas.....	3 15
Slack	2 40

SUBBITUMINOUS—

District No. 2: Lewis and Thurston Counties—

Run of mine.....	\$2 65
Prepared sizes—	
Lump	3 85
Lump nut	3 15
Nut	2 90
Slack	1 15

Washed Coals.

BITUMINOUS—Kittitas County—

Prepared sizes	\$3 90
----------------------	--------

District No. 3: Pierce, King, Lewis and Skagit Counties—

Prepared sizes—	
Lump nut	\$5 90
Mixed steam	5 15
Straight steam and gas.....	4 70
Slack	2 40

SUBBITUMINOUS—

District No. 4: King County—

Prepared sizes—	
Lump nut	\$4 90
Pea	3 40
Buckwheat	3 15
Slack	1 40

District No. 5: Lewis County—

Prepared sizes—	
Lump	\$3 85
Nut	3 65
Pea	2 90
Buckwheat	1 40
Slack	1 15

NEW DEVELOPMENT.

During the past year considerable development work was done in opening new mines among which were the following:

A new mine is being opened a short distance north of the city limits of Bellingham, known as the Bellingham Coal Mines, under the management of John C. Eden and Michael Earles. The seam of coal on which this mine is opened was worked in the early history of the State and the coal shipped to San Francisco. The old mines, which were located about two miles south of the present opening, were abandoned about thirty-five years ago.

The mines opened at Ravensdale by the Raven Coal Company shipped a few cars of coal during the closing months of the year.

The Western Coke & Colliery Company is opening a new tunnel which will intersect the seam of coal on which the Niblock Mine formerly operated. This property is located near the town of Snoqualmie.

The Denny-Renton Clay & Coal Company is doing development work at the old Kummer mine near Black Diamond and will ship some coal from this property during 1919.

The Cumberland Coal Company, under the management of Abe Morris, is re-opening the Eureka mine, located at Cumberland.

The Black River Coal Company, under the management of Andrew Kennedy, is doing considerable development work on its property near Renton and expects to increase its output during 1919.

The Washington Colliery Company, which was opening a mine near the town of New Castle, has stopped development work for the present.

The Hiawatha mine, operated by the Northwestern Improvement Company, located near the town of Durham, did considerable development work during the year, but is not yet on a permanent operating basis.

John McQuade has opened a small mine on the property formerly operated at Cedar Mountain. The coal from this mine is delivered to the Seattle market by auto trucks.

The Jones brothers have done considerable prospecting on their property near the old Cedar Mountain mine and have opened up some good prospects which they expect to develop during the next year.

The Cokedale mine in Skagit county is now on an operating basis and should increase its output during 1919.

The Colville Valley Coal Company is opening a mine near the town of Valley, Washington, and expects to ship coal during 1919.

Contracts have been let and work started in sinking a shaft 300 feet to a seam of coal on the property of the Wenatchee Orchard Land Company in Moses Coulee near Wenatchee, Washington.

LABOR CONDITIONS.

No labor troubles of any importance occurred during the past year. The miners as a whole stood loyally behind the Government in doing everything possible to win the war. The increase granted the miners on November 16, 1917, was in effect during the year which insured good wages to all coal mine employes. A shortage of labor reduced the output at some of the mines during the year due to the large number drafted into the army and to many of the mine employes securing employment in the shipyards in the Puget Sound district. No labor shortage was reported in the closing months of the year.

All mines are operated under agreement with the mine workers' organization. During the past year the district officials made a special effort to keep the men at work while their grievances were being settled so as not to interfere with production. At most of the mines the miners' organization assessed their membership a certain percentage of their earnings to keep up war work.

The following day wage scale was in effect throughout the year:

Inside Mines.		Electricians—	
Miners	\$5 89	First class in and around mine...	\$5 70
Timbermen	5 89	Second class in and around mine.	5 40
Timbermen's helpers	5 20	Machinists—	
Tracklayers	5 89	First class in and around mine...	5 70
Tracklayers' helpers	5 20	Second class in and around mine.	5 40
Motormen	5 40	Electricians' and machinists' helpers	
Drivers	5 40	in and around mine.....	4 90
Parting boys	3 50	Firemen	5 05
Parting boys	4 00	Cagers	5 15
Greasers	3 45	Cagers' helpers	4 75
Trappers	3 20	Teamsters	4 90
Rope riders	5 40	Greasers	3 05
Locomotive engineers	5 40	Couplers	3 20
Holstmen on development work.....	5 20	Dumper, cross-over.....	4 75
Cagers	5 40	Blacksmith—First	5 70
Cagers' helpers	5 20	Second	5 40
Pumpmen	5 20	Blacksmiths' helpers	4 90
Inside labor not specified.....	5 20	Carpenters—First	5 70
Boys working on hoists except on		Second	5 20
main slopes and auxiliary slopes.	4 10	Car repairs	4 90
Outside Mines.		Choppers	4 90
Main hoisting engineers.....	\$5 65	Screeners (men)	4 40
Power plant engineers.....	5 50	Screeners (boys)	3 40
Compressor engineers	5 45	Moving picking table (men).....	4 40
Development engineers	5 15	Moving picking table (boys).....	3 40
		Outside labor	4 65

MINE RESCUE AND FIRST AID TRAINING.

Eighty-nine men have been trained in mine rescue and 178 in first aid during the past year. This training is given by the U. S. Bureau of Mines, either at the Mine Rescue Station, maintained at the University of Washington, Seattle, or when the representative of the Bureau, C. K. Chisholm, visits the mining camps. Much good has resulted from the work, for generally a person taking this training becomes a booster for safety and it is often the means of starting a course of study which results in a great deal of good to most men. A good first aid or mine rescue booster is an asset to any operating company and should be encouraged. A case which has just come to my attention shows the practical results of teaching first aid.

A miner at No. 5 mine, operated by the Northwestern Improvement Company at Roslyn, came in contact with a live wire, rendering him unconscious. Mike Nelland, a fellow workman, who had taken first aid training, immediately started artificial respiration and worked on this man for one hour until help arrived. When help arrived he was relieved and artificial respiration was continued for forty-five minutes longer, bringing patient to life sufficiently to remove him to the hospital, where he recovered. If this man had been working with someone who knew nothing of first aid treatment he would not have been alive today. All persons working in or around coal mines should be compelled to take this training.

FATAL ACCIDENTS.

Thirty-four persons lost their lives in and around the mines during the past year. Thirty-two inside and two outside. The most serious accident of the year occurred on August 28th at the Burnett mine in Pierce county, when twelve persons were killed and three others injured by an explosion of gas and coal dust, a full report of which is given in another part of this report. Thirteen fatal accidents occurred from falls of rock or coal due, in most cases, to carelessness in not timbering or taking unnecessary chances with loose top. A large percentage of accidents from the foregoing cause could have been prevented by the person himself taking the proper precautions. However, it is a well known fact that miners will take a chance if not made to understand the danger of doing so. The new mining laws, which became effective in 1917, made provisions for a more frequent inspection of the working faces with the object in view of reducing accidents from falls of roof and coal. The results shown during the past year are not what should be expected and shows that either the working places are not being inspected as they should be during the time the men are in the mine or that the men making the inspection are careless. A careless inspection by the mine foreman or assistant is worse than no inspection at all. If they cannot see a danger and correct it the time used in making the inspection is wasted. Each man should be held responsible to some extent for accidents that occur in his district and while it is realized that some accidents will occur with the most careful inspection some of the accidents, during the past year, could have been avoided if more care had been exercised by the foreman and assistants in having the places properly timbered. While the percentage of fatal accidents from fall of roof and coal are higher than from any other cause, the explosion at Burnett follows with twelve fatalities. This, no doubt, was caused by the ignition of gas by a shot which in turn ignited coal dust which was present, causing the loss of life. Shot lighting in mines worked with safety lamps should have the most careful supervision especially where dust is present. The cause of the Burnett explosion which resulted in this loss of life was no doubt due to the fire boss not making the proper examination before lighting the shots. In mines where the gangway and counter system are used an accident, such as that at Burnett, may happen any time if the person firing the shots is not careful. It is a well known fact that in loading coal from the chutes, if the loaders are not careful, they can short circuit the air by pulling the coal below the bulkhead thereby allowing the air, that should ventilate the working places further in, to escape through the bulkhead. The dangerous condition made possible by short circuiting the air as described was responsible for both the Ravensdale and Burnett explosions, the most disastrous in recent years in the state. To correct this danger, mine officials must give strict instructions to all loaders with regard to keeping the chutes full above the bulkhead and see that the instructions are carried out. Shotlighters should be the most careful men that can be found and wherever possible shots should be fired when the men are out of the mine. Wherever dust is present it should be taken care of in such a way that if any gas is ignited it would not in turn ignite the dust and the explosion be carried throughout the mine. The two foregoing causes are re-

sponsible for the greatest number of fatal accidents in the past few years and mine officials are requested to give them their earnest consideration so as to keep the fatal accidents down to a minimum.

NON-FATAL ACCIDENTS.

There were 692 non-fatal accidents in 1918 as compared with 916 in 1917. In making this comparison it should be explained that in gathering the data for 1918 no accident was counted with a time loss of less than seven days. During the first seven months of 1917 all accidents with a time loss of more than two and one-half days were counted. On July 1, 1917, the new law making a seven-day waiting period went into effect. From that time compensation was not allowed for accidents where time loss was less than seven days, therefore the accident was not listed. Six hundred and five of the accidents occurred inside and eighty-seven on the surface. One accident resulted in permanent total disability; forty-five others suffered permanent partial disability. As usual falls of rock and coal at the working face were the cause of the greatest number of accidents or about thirty-one per cent of the total. This percentage is about the same as last year. One hundred and twenty-two accidents or about seventeen per cent of the total occurred on the haulage caused mostly by mine cars and locomotives. The two causes mentioned account for about fifty per cent of the accidents in coal mines and mine officials should give them careful attention.

A time loss occurred of 16,558 days to those returned to work or an average of about twenty-four days to each man injured. While it is realized that a large number of men, who were not miners, were employed last year this time loss does not reflect credit on the supervision at some of the mines. There has been too much of a tendency during the past year to pass up the careless man on account of the labor shortage, but during the next few years, with the new safety law in effect, mine officials will have to give more attention to safety or they will find that their industrial insurance is costing from fifteen to thirty per cent more than the mine next to them where safety is given more consideration.

INSPECTIONS AND GENERAL CONDITIONS OF MINES.

Two hundred and twenty inspections have been made during the past year by the Mine Inspector and one deputy. By order of the inspection department a number of mines have installed electric safety lamps, replacing the open lights formerly used. It can be said without fear of contradiction that the operating conditions in the coal mines of Washington are the worst in the United States. This is especially true on the west side of the Cascade mountains where the beds worked are on a pitch of from 30 to 80 degrees, greatly increasing the liability of accident over the flat workings of the coal mines of the East and Middle states.

Eight of the fatal accidents, during the past year, can be charged directly to the pitch workings and others could be classed as partly due to this condition. The mines in the State, with few exceptions, are in better condition with regard to safety than they have been in the past and the operators as a whole are doing everything possible to keep them so.

SHOT LIGHTING.

This is one of the problems that mine officials should give careful consideration and wherever possible shooting should be done when the men are out of the mine. Statistics show that more than 50 per cent of the explosions which have occurred in the State where over five lives were lost were caused by shooting or lighting shots while the men were in the mine and while it is realized that it is impossible to stop shooting altogether in mines worked on the chute and pillar system there is no reason why the shooting done at quitting time cannot be done after the men leave the mine wherever dust or gas is given off in any quantity. This question will be taken up during the present year by the inspection department with the end in view of having this system adopted.

CHANGES IN THE MINING LAWS.

Changes were made in the following sections of the coal mining laws during the session of the legislature just closed and will be in effect after June 13, 1919. New parts of the sections are italicized.

AN ACT relating to coal mining, and amending sections 7, 36, 46, 107, 200 of chapter 36 of the Laws of 1917.

Be it enacted by the Legislature of the State of Washington:

SECTION 1. That section 7 of chapter 36 of the Laws of 1917 be amended to read as follows:

Section 7. The salary of the mine inspector shall be three thousand dollars (\$3,000.00) per annum, and the salary of the deputy mine inspector shall be *three thousand dollars (\$3,000.00)* per annum. The inspector and his deputy shall be allowed their necessary expenses for office maintenance, stenographic services, and for equipment and instruments, as well as for actual and necessary traveling expenses while in the performance of their duties, under the provisions of this act. The auditor of this state is hereby authorized and directed to draw his warrant on the state treasurer in favor of the mine inspector and his deputy for the amounts due them for their salaries monthly, and also for their expenses, upon proper vouchers, to be paid out of any moneys in the state treasury appropriated for that purpose.

The mine inspector and his deputy shall devote their entire time to the duties of their respective offices; they shall have no financial interest, direct or indirect, in any mine under the supervision of the inspection department.

The mine inspector and his deputy shall, before entering upon the discharge of their duties, each take an oath to discharge their duties impartially and with fidelity and to the best of their knowledge and ability.

It shall be the duty of the mine inspector and his deputy to enforce the provisions of this act, for the regulation of mines, unless enforcement is otherwise especially provided for.

SEC. 2. That section 36 of chapter 36 of the Laws of 1917 be amended to read as follows:

Section 36. Every main fan at gaseous mines shall be kept in operation continuously, day and night, unless operations are definitely suspended *for a period of one week or more: Provided*, That should it at any time become necessary to stop any fan at any mine, gaseous or non-gaseous, on account of accident to part of the machinery connected therewith, or by reason of any other unavoidable cause, it shall be the duty of the mine foreman, or the assistant mine foreman, in charge, after having first provided for the safety of the persons employed in the mine, to order said fan stopped for necessary repairs.

SEC. 3. That section 46 of chapter 36 of the Laws of 1917 be amended to read as follows:

Section 46. It shall be unlawful for the owner, operator or superintendent of any mine, or the agent of such owner, operator or superintendent, to employ any person or persons in such mine, or permit any person or persons to be in such mine for the

purpose of working therein, unless there are provided and maintained in connection with and leading from such mine, in addition to the hoisting shaft, slope or other place of delivery not less than two openings or outlets to the surface, or one outlet to the surface and one underground passage leading to a contiguous mine; said openings or outlets to be separated from each other and from such hoisting shaft, slope or other place of delivery, by a stratum of not less than *fifty (50)* feet in thickness, at and through which openings or outlets safe and ready means of ingress and egress are at all times available by not less than three routes, for any person or persons employed in said mine; and in connection with and leading from each seam or stratum of coal being worked in said mine, and from every lift thereof, not less than two openings or outlets leading directly or indirectly to the surface, and separated by a stratum of not less than *fifty (50)* feet in thickness; at and through which two openings safe and ready means of ingress and egress are at all times available by not less than two routes for any person or persons employed in said stratum or seam of coal or lift thereof. This section shall not apply to a mine while being worked for the purpose of making communication between said outlets, or to open a seam or stratum of coal, or new lift thereof, so long as not more than twenty (20) persons are employed at any time in such part of a mine, or new lift of a mine; neither shall it apply to any mine or part of a mine in which any outlet has been rendered unavailable by reason of the final robbing of pillars, previous to abandonment, so long as not more than twenty (20) persons are employed in such mine or any part of such mine at one time.

This section shall apply only to mines or parts of mines which shall be developed or in which development shall be started after this act shall go into effect, but it shall not be construed to permit any openings or outlets now in use for the safety of men to be abandoned unless other such openings are substituted therefor.

Sec. 4. That section 47 of chapter 36 of the Laws of 1917 be amended to read as follows:

Section 47. It shall be unlawful for the owner, operator or superintendent of any mine to loosen or remove, or cause or permit to be loosened or removed from its original position, any coal within a distance of two hundred and fifty (250) feet on either side of any hoisting slope, or within a distance of fifty (50) feet on either side of any permanent airway, or escapeway, or within twenty-five (25) feet of any level or gangway, or any parallel airway to any level or gangway, except for the purpose of driving air and escapeways, crosscuts and such other passages as may be necessary for the proper operation of the mine: *Provided, That if the inspector shall deem it safe to permit coal to be loosened or removed within a distance nearer than two hundred and fifty (250) feet from any hoisting slope he may grant permission to the operator to remove such coal within a distance of not less than one hundred and fifty (150) feet of such hoisting slope, by issuing a written permit therefor.* This section shall not be construed to prevent the drawing of pillars previous to the final abandonment of the mine.

Sec. 5. That section 107 of chapter 36 of the Laws of 1917 be amended to read as follows:

Section 107. When operations are temporarily suspended in a mine, the mine foreman shall see that a danger sign is placed across the mine entrance, which sign shall be sufficient warning for persons not to enter the mine. If the circulation of air through the mine be stopped, each entrance to said mine shall be fenced off in such manner as will ordinarily prevent persons from entering said mine, and a danger sign shall be displayed upon said fence at each entrance. The mine foreman shall see that all danger signs used at the mine are in good condition, and if they become defective he shall cause same to be repaired, or notify the superintendent.

In case of accident to a ventilating fan or its machinery whereby the ventilation in a mine is, or is about to be seriously interrupted, the mine foreman shall order the men to withdraw immediately from the mine, and he shall not allow them to return to their work until the ventilation has been restored and the mine has been thoroughly examined by him, or by an assistant mine foreman or fire boss, and reported safe.

In case the operation of the ventilating fan is stopped at a gaseous mine because of the suspension of the operations in the mine, the mine foreman shall not allow the men employed therein to enter the mine until the ventilation has been restored by the operation of the fan for at least twelve hours and the mine has been thoroughly examined by him, or by an assistant mine foreman or fire boss, and reported safe.

SEC. 6. That section 200 of chapter 36 of the Laws of 1917 be amended to read as follows:

Copies of these rules shall be printed in English, * * * * by the operator, and each workman in and around the mine shall procure a copy * * * *. If he cannot read * * * * *the English language*, he must at his own expense, procure an interpreter to correctly interpret the rules to him. The workman will pay the operator twenty-five (25c) cents per copy for the rules, and if he returns the same to the operator in legible condition, the amount so paid by him shall be returned.

NEW MINES, OLD MINES REOPENED, MINES ABANDONED, TEMPORARILY CLOSED OR NOT HEARD FROM SINCE LAST REPORT, 1918.

Northwestern Improvement Company is developing the Hiawatha mine, Hiawatha, King county. John McQuade opened a new mine at Cedar Mountain, King county. May Creek Coal Company opened a new mine at Coal Field, King county, but abandoned same in May 1918. Gwinn & Gallagher, Incorporated, operating new mine on seam underlying the Roslyn bed, Ronald, Kittitas county. Northwestern Improvement Company opened new mine on Big bed, Ronald, Kittitas county, also No. 8 mine on Roslyn bed, Roslyn. Lincoln Coal Company opened a new mine at Galvin, Lewis county. The Bellingham Coal Company is opening a new mine at Bellingham, Whatcom county. The Twin River Development Company washed and recovered coal in old dump at Kangley mine. Raven Coal Company opening mine at Ravensdale, King county.

John McQuade prospect, King county, reported in 1917, permanently abandoned. The Wright mine, Kittitas county, operated by Roslyn Fuel Company did not work during the year. The South Willis Coal Company, Pierce county, Champion mine and Wellington mine, reported in 1917, permanently abandoned. Melmont mine, Pierce county, operated by Carbon Hill Coal Company abandoned in May 1918. Gale Creek Coal Mines Company, Pierce county, abandoned Gale Creek mine in November 1918. The Richmond mine, Richmond Coal Company, Thurston county, closed in May 1918.

Eureka mine, operated by Cassidy Coal Company in 1915, reopened by Cumberland Coal Mining Company. Denny & Denny reopened the Wilson mine, near Thorp, Kittitas county. Pacific and Eastern Coal Company reopened Divide mine, Lewis county, but no coal was shipped.

The following companies have changed names: Andrew Kennedy to Central Coal Company; Pacific Coast Coal Company, Renton, to Renton Coal Company; Agnew Fuel Company to Monarch Coal Mining Company.

STATISTICS.

The unit of weight used in this report is the avoirdupois short ton (2,000 pounds) and is used throughout and is meant when the word tons is used, with the exception of the data on imports and exports as reported by the collector of customs, port warden of Seattle, and harbormaster of Tacoma, when the long ton (2,240 pounds) is used. The total tonnage given as the quantity of coal produced or total output at the individual mines represents only the usable fuel. Refuse, slate and bone brought out of the mine or picked or sorted from the coal in the tipple and refuse from washeries and dry cleaning plants are not considered as part of the quantity of coal produced. The total value of the coal is the sum of all the values

reported by the individual operators, and the average value for the county or state as the case may be is the total divided by the total tons.

The monthly schedules sent out by this Department to the operators, request that the report of tonnage be given in short tons and segregated as follows: Tons of coal shipped, this should include all coal loaded at the mines for shipment and consumed elsewhere; sold to employes and local trade, this should include wagon trade, coal used by employes, coal loaded directly from the tippie into engine tenders, and that part of the product used in the immediate vicinity of the mines by such industries as brick and sewer pipe plants, local power plants and other local industries; used for power, this should represent all of the coal used to generate steam and heat for the operation of the mine and should include sludge and all the mine product used for that purpose; charged into ovens for coke, this is all coal made into coke at the mines whether mined at the mine where the ovens are located or shipped from some other source. The total tonnage is explained above and is the total of the above headings.

The schedules also request that the number of full days each mine was operated be given, and also the number of 8-hour shifts (men-days) worked inside and the number of men-days worked outside be given, exclusive of the shifts worked by office workers. The average number of employes is then found by dividing the men-days by the full days worked.

In compiling the statistics for the year, the number of the full days worked at each mine is obtained directly by adding the monthly statement of days. The average number of men employed inside, outside and as a total is found by dividing the total number of days for the year into the total shifts inside, outside and total as the case may be. The sum of the men-days or shifts for all mines is divided by the total number of employes thus obtained to ascertain the number of 8-hour days the total number of men were at work in the county or state as the case may be. It is thus shown that instead of having some of the men working on different 8-hour periods during a full day, they are all considered as working on the same 8-hour day. The daily output per employe is found by dividing the total output by the total men-days worked. In some instances, where no record was kept of the men-days worked but the number of employes were given, the shifts were obtained by multiplying the full days worked, as reported, by the number of men employed in the 24-hour day.

In giving the total value of the production at the close of the year, it should be understood that the total value given is the total selling value at the mine for the entire output and should represent returns to the operators for coal sold plus estimated value of that not sold, such as all the product used for power, etc.

The yearly schedules sent to the operators request the tonnage of coal washed; it should be understood that this means the tonnage that comes out of the mine and not the cleaned product. The tonnage of refuse requested is the difference between the coal mined and the cleaned product. As stated before the cleaned product is the tonnage considered in arriving at the total production.

In compiling the statistics for this report we have tried to tabulate them as near as possible as outlined on the standardized forms adopted by the U. S. Bureau of Mines. While the statistics are not complete as outlined we hope to make them so in future reports.

SUMMARY.

The following summary for the years ending December 31, 1917 and 1918 is here presented:

SUMMARY	1917	1918
Number of counties producing coal.....	7	7
Number of mines and openings of all kinds.....	63	72
New or old mines reopened or again reported during the year.....	13	13
Mines closed, abandoned, or not heard from since last report.....	5	4
Total production of coal (short tons).....	4,002,759	4,128,424
Total value of coal at mine.....	\$11,356,357	\$14,564,445
Average value of coal at mine, per short ton.....	\$2.84	\$3.53
Total production of coke at mines, short tons.....	96,427	93,690
Total production of by-product coke.....	26,345	50,650
Total production of coke.....	122,772	144,340
Total value of coke.....	\$915,348	\$1,295,258
Average value of coke, per short ton.....	\$7.46	\$8.97
Total number of inside employees at mines.....	4,058	4,172
Total number of outside employees at mines, including coke workers..	1,287	1,675
Total number of employees at mines.....	5,345	5,847
Average number of days operated.....	271	296
Yearly production per employa (short tons).....	749	706
Daily average short tons per employe.....	2.76	2.65
Number of men accidentally killed, inside.....	27	32
Number of men accidentally killed, outside.....	3	2
Total number of men accidentally killed.....	30	34
Number of widows.....	15	18
Number of orphans.....	50	46
Number of tons mined to each life lost.....	133,425	121,424
Number of lives lost per 1,000 employes, inside.....	6.65	7.67
Number of lives lost per 1,000 employes, inside and outside.....	5.61	5.81
Number of non-fatal accidents, inside.....	822	606
Number of non-fatal accidents, outside.....	94	87
Total number of non-fatal accidents.....	916	692
Number of tons mined per non-fatal accident, inside.....	4,570	6,823
Number of tons mined per non-fatal accident, outside.....	42,583	47,453
Number of tons mined per non-fatal accident, inside and outside.....	4,370	5,906
Number of non-fatal accidents per 1,000 employes, inside.....	202.5	145.0
Number of non-fatal accidents per 1,000 employes, outside.....	73.0	51.9
Non-fatal accidents per 1,000 employes, inside and outside.....	171.3	118.3
Number of injured returned to work, inside and outside.....	778	599
Time loss of injured returned to work.....	16,806	16,558
Average time loss of injured returned to work.....	21.60	27.64

PRODUCTION OF COKE BY COUNTIES.

COUNTY	1917	1918
Pierce.....	96,427	93,690
King.....	26,345	50,650

PRODUCTION OF COAL BY COUNTIES, 1917.

COUNTY	Tons of Coal Shipped	Sold to Local Trade	Used for Power	Charged Into Coke Ovens	Total Coal Production	Total Value	Average Value Per Ton at Mine	Average Number of Days Operated	Average Number of Employees
King.....	1,921,629	23,674	69,093	† 45,025	1,314,266	\$3,049,597	\$3.00	266	2,040
Kittitas.....	1,663,201	19,490	58,537	.....	1,741,227	4,545,890	2.61	280	1,631
Lewis.....	106,642	17,069	6,587	.....	130,578	3,865,637	2.81	233	1,180
Pierce.....	427,663	4,474	14,778	* 161,748	606,049	2,154,862	3.56	267	1,862
Skagit.....	.....	1,000	.....	.....	1,000	.....	.....	198	25
Thurston.....	199,200	1,270	4,218	.....	204,688	339,241	1.61	234	157
Whatcom.....	4,841	.....	.....	.....	4,841	.....	.....	287	10
The State.....	3,623,196	67,016	153,438	† 206,773	4,002,769	\$11,856,857	\$2.84	271	5,345

* 2,684 tons purchased and charged into coke ovens at Fairfax. This coal is included in coal shipped from the other mines.

† 45,025 tons purchased and charged into coke ovens at Seattle. This coal is included in coal shipped from the other mines.

‡ 47,659 tons purchased and charged into coke ovens at Seattle and Fairfax. This coal is included in coal shipped from the other mines.

PRODUCTION OF COAL BY COUNTIES, 1918.

COUNTY	Tons of Coal Shipped	Sold to Local Trade	Used for Power	Charged Into Coke Ovens	Total Coal Production	Total Value	Average Value Per Ton at Mine	Average Number of Days Operated	Average Number of Employees
King.....	1,213,534	36,657	81,410	† 89,374	1,331,601	\$5,439,512	\$4.08	257	2,337
Kittitas.....	1,647,448	19,125	72,406	.....	1,739,379	6,277,587	3.03	278	1,761
Lewis.....	147,673	16,828	10,120	.....	174,621	496,122	2.84	231	958
Pierce.....	409,568	9,020	28,437	* 154,439	600,917	2,779,442	4.63	280	1,238
Skagit.....	5,886	12	.....	.....	5,897	Incl'd with Whatcom	.....	291	27
Thurston.....	295,395	1,512	4,469	.....	271,406	543,783	2.00	268	191
Whatcom.....	3,820	344	433	.....	4,603	28,749	2.73	114	45
The State.....	3,603,329	83,486	197,765	† 243,513	4,128,424	\$14,564,445	\$3.53	266	5,847

* 547 tons shipped from Melmont and made into coke at Carbonado.

† 89,374 tons shipped from mines and made into coke at Seattle.

‡ 89,921 tons shipped from mines and made into coke at Seattle and Carbonado.

COAL PRODUCTION BY COUNTIES FOR EACH MONTH, 1918.

MONTH	KING		KITITAS		LEWIS		PIERCE		SKAGIT		THURSTON		WHATCOM		THE STATE		
	Pro- duction		Pro- duction		Pro- duction		Pro- duction		Pro- duction		Pro- duction		Pro- duction		Pro- duction	Employees* (Average)	Days Worked	Men- Days
January.....	110,441	144,798	19,307	45,121	.....	.....	23,718	522	352,907	6,176.8	21.2	131,209					
February.....	118,605	148,784	12,988	56,843	.....	.....	16,816	385	354,421	6,067.7	22.0	133,480					
March.....	111,003	145,348	13,215	60,576	10	.....	22,628	246	353,876	5,968.8	22.1	132,182					
April.....	91,548	137,042	12,523	52,546	2	.....	21,010	389	315,060	5,730.5	20.8	119,614					
May.....	98,845	161,156	11,614	49,047	.....	.....	25,971	343	346,970	5,968.3	22.1	132,177					
June.....	101,403	136,050	11,471	49,382	.....	.....	21,664	230	320,150	5,698.3	22.7	139,045					
July.....	119,000	132,940	11,701	52,065	.....	.....	24,703	293	360,801	5,493.3	24.1	132,500					
August.....	127,598	150,081	15,380	56,469	1,577	.....	22,108	347	382,160	5,450.1	25.3	137,857					
September.....	108,625	130,551	15,266	42,963	1,958	.....	22,189	257	330,869	5,382.8	22.9	123,846					
October.....	122,808	153,975	21,934	54,851	1,768	.....	22,683	500	377,967	5,510.4	25.4	140,397					
November.....	105,707	128,766	14,853	43,659	545	.....	22,354	263	316,307	5,548.5	22.2	123,452					
December.....	106,268	131,249	15,009	38,415	30	.....	26,362	648	316,960	5,462.2	22.1	121,021					
The Year.....	1,331,601	1,730,879	174,621	600,917	5,897	.....	271,406	4,603	4,128,424	5,847	266	1,556,895					

* The average number of employees is the sum of the average number of men employed at each mine during the month or the year, as the case may be, and the days worked is the average number of days that these employees were at work during the month or year.

TABLE SHOWING AVERAGE DAYS WORKED, NUMBER OF MEN EMPLOYED, AND DAILY OUTPUT IN SHORT TONS PER EMPLOYEE, BY COUNTIES, FOR THE YEARS 1909-1918.

YEAR	KING COUNTY			KITTITAS COUNTY			CLALLAM COUNTY			LEWIS COUNTY			PIERCE COUNTY		
	Average Days Worked	Average Number of Men	Daily Output Per Man	Average Days Worked	Average Number of Men	Daily Output Per Man	Average Days Worked	Average Number of Men	Daily Output Per Man	Average Days Worked	Average Number of Men	Daily Output Per Man	Average Days Worked	Average Number of Men	Daily Output Per Man
1909.....	278	1,738	2.51	205	2,222	3.40	306	32	0.28	242	205	2.04	283	1,302	1.60
1910.....	270	2,028	2.30	242	2,195	3.13	77	7	1.20	256	261	2.58	292	1,554	1.73
1911.....	253	1,900	2.50	189	1,987	3.33	.....	.....	.....	212	273	2.74	278	1,407	1.91
1912.....	229	2,023	2.96	202	1,743	3.50	.....	.....	.....	184	280	2.40	246	1,434	2.15
1913.....	200	2,417	2.76	239	1,664	3.07	.....	.....	.....	180	292	2.82	276	1,686	1.90
1914.....	187	2,860	2.36	196	1,083	3.76	.....	.....	.....	115	220	3.45	252	1,240	1.78
1915.....	155	1,869	2.91	127	1,534	4.51	.....	.....	.....	138	133	4.16	235	1,179	1.77
1916.....	165	1,765	2.50	224	1,513	3.88	.....	.....	.....	167	147	3.40	251	1,170	1.80
1917.....	266	2,040	2.42	249	1,631	3.69	.....	.....	.....	233	180	3.12	207	1,302	1.74
1918.....	257	2,337	2.22	278	1,751	3.57	.....	.....	.....	231	258	2.98	280	1,238	1.73

TABLE SHOWING AVERAGE DAYS WORKED, NUMBER OF MEN EMPLOYED, AND DAILY OUTPUT IN SHORT TONS PER EMPLOYEE, BY COUNTIES, FOR THE YEARS 1909-1918.—Concluded.

YEAR	SKAGIT COUNTY			THURSTON COUNTY			WHATCOM COUNTY			THE STATE		
	Average Days Worked	Average Number of Men	Daily Output Per Man	Average Days Worked	Average Number of Men	Daily Output Per Man	Average Days Worked	Average Number of Men	Daily Output Per Man	Average Days Worked	Average Number of Men	Daily Output Per Man
1909.....				142	132	4.85	272	34	1.58	247	5,725	2.54
1910.....				163	47	3.91	823	29	1.32	264	6,121	2.46
1911.....				196	109	4.30	311	15	0.75	234	5,781	2.46
1912.....				220	168	3.60	263	20	1.24	225	5,673	2.62
1913.....				203	172	4.39	298	15	1.63	251	6,065	2.62
1914.....				153	130	5.64	285	18	1.29	200	5,647	2.60
1915.....				157	104	6.86	222	19	1.48	165	4,898	3.01
1916.....				190	128	6.48	280	14	1.48	218	4,746	2.91
1917.....				234	157	5.58	287	10	1.73	271	5,345	2.76
1918.....				268	191	5.29	114	45	0.90	266	5,847	2.65

PRODUCTION OF COAL IN WASHINGTON, 1911-1918, BY COUNTIES, IN SHORT TONS.

COUNTY	1911	1912	1913	1914	1915	1916	1917	1918	Increase or Decrease, 1918
King.....	1,241,583	1,050,053	1,350,274	1,042,607	844,066	880,275	1,314,366	1,331,601	+17,235
Kittitas.....	1,254,846	1,235,600	1,330,506	1,237,564	879,062	1,316,963	1,741,237	1,739,379	-1,858
Lewis.....	158,801	127,962	148,592	87,558	78,259	100,121	130,578	174,621	+44,043
Pierce.....	706,708	789,320	832,272	553,841	488,668	538,162	606,049	600,917	+5,182
Skagit.....	16,840	136,478	153,528	112,180	112,036	105,066	1,000	5,837	+4,897
Thurston.....	3,476	6,523	7,325	6,602	6,255	.....	204,688	271,406	+66,718
Whatcom.....	.....	.....	.....	.....	.....	.....	4,841	4,603	-238
Totals.....	3,548,322	3,346,946	3,831,647	3,040,361	2,409,331	3,019,600	4,002,759	4,129,424	+125,665
Total Value.....	\$8,507,864	\$9,122,572	\$9,995,362	\$7,142,064	\$5,868,524	\$7,155,317	\$11,866,367	\$14,564,445	+\$3,208,098

PRODUCTION OF COAL IN WASHINGTON, 1860-1918, IN SHORT TONS.*

Year	Quantity	Year	Quantity	Year	Quantity	Year	Quantity	Year	Quantity	Year	Quantity	Year	Quantity
1860.....	5,374	1870.....	17,844	1880.....	145,015	1890.....	1,293,689	1900.....	2,418,034	1910.....	3,970,599		
1861.....	6,000	1871.....	20,000	1881.....	198,000	1891.....	1,065,249	1901.....	2,468,100	1911.....	3,548,332		
1862.....	7,000	1872.....	23,000	1882.....	177,340	1892.....	1,140,575	1902.....	2,690,789	1912.....	3,246,946		
1863.....	8,000	1873.....	26,000	1883.....	244,860	1893.....	1,203,630	1903.....	2,280,468	1913.....	3,581,647		
1864.....	10,000	1874.....	30,552	1884.....	366,806	1894.....	1,131,660	1904.....	2,995,633	1914.....	3,040,381		
1865.....	12,000	1875.....	99,568	1885.....	390,220	1895.....	1,183,737	1905.....	2,846,401	1915.....	2,409,381		
1866.....	13,000	1876.....	110,342	1886.....	423,525	1896.....	1,202,534	1906.....	3,290,533	1916.....	3,019,600		
1867.....	13,500	1877.....	120,868	1887.....	772,601	1897.....	1,380,192	1907.....	3,732,433	1917.....	4,002,769		
1868.....	15,000	1878.....	131,600	1888.....	1,215,760	1898.....	1,775,257	1908.....	2,977,460	1918.....	4,128,424		
1869.....	16,200	1879.....	142,666	1889.....	1,030,578	1899.....	1,017,007	1909.....	3,560,639	Total..	80,871,798		

* From Mine Inspectors' Reports 1890-1891, inclusive, are taken from U. S. G. S. Reports.

SUMMARY FOR THE YEARS 1900-1918.

YEAR	Total Coal Production In Short Tons	Total Value at Mine	Average Value Per Ton at Mine	Total Coke Production In Short Tons*	Total Value of Coke*	Average Value of Coke Per Ton	Total Number of Inside Employees	Total Number of Outside Employees	Total Number of Employees	Average Tons Per Man Per Year
1900.....	2,418,034	\$4,425,092	\$1.83	35,931	\$178,012	\$4.90	3,447	791	4,238	570
1901.....	2,468,100	5,353,304	1.97	40,197	245,936	5.00	3,945	881	4,826	511
1902.....	2,690,789	5,800,354	1.97	40,569	262,845	5.00	3,515	829	4,344	619
1903.....	2,280,468	6,180,635	2.00	47,916	239,580	5.00	3,163	940	4,103	674
1904.....	2,995,633	5,697,402	1.90	46,176	230,875	5.00	3,748	888	4,636	572
1905.....	2,846,901	5,779,209	2.03	50,972	242,117	4.75	4,060	1,268	5,327	680
1906.....	3,290,533	6,021,157	1.83	44,944	216,731	4.80	3,929	1,258	5,187	609
1907.....	3,732,433	7,708,860	2.07	49,798	308,250	6.19	4,866	1,258	6,124	587
1908.....	2,977,460	6,054,002	2.03	37,881	206,656	5.50	4,270	1,071	5,341	627
1909.....	3,560,639	9,246,995	2.57	42,335	232,837	5.50	4,420	1,305	5,725	627
1910.....	3,970,560	10,266,400	2.58	58,715	322,932	5.50	4,683	1,488	6,171	650
1911.....	3,548,322	8,507,384	2.44	40,301	233,948	5.81	4,398	1,383	5,781	612
1912.....	3,346,946	8,122,572	2.43	44,880	270,769	5.54	4,392	1,311	5,703	590
1913.....	3,831,647	9,981,302	2.60	75,732	425,032	5.62	4,711	1,354	6,065	632
1914.....	3,040,361	7,142,064	2.35	78,573	404,126	5.15	4,383	1,204	5,587	555
1915.....	2,409,381	5,393,524	2.24	88,006	471,752	5.32	3,983	1,145	5,128	498
1916.....	3,019,600	7,155,317	2.37	93,722	487,310	5.20	3,598	1,160	4,758	630
1917.....	4,002,769	11,850,357	2.94	122,773	915,848	7.46	4,053	1,297	5,350	749
1918.....	4,128,424	14,564,445	3.53	144,349	1,395,359	9.67	4,173	1,675	5,848	708

* Prior to 1917 the total production and value of coke is given for the coke made at the mines only.

TABLE SHOWING PRODUCTIONS AND PERCENTAGES OF COAL MINED BY MACHINE, HAND AND SHOT OFF SOLID, AND TONNAGES OF COAL WASHED, CLEANED COAL, REFUSE AND PERCENTAGE OF CLEANED COAL TO TOTAL OUTPUT, BY COUNTIES, 1918.

NAME OF COUNTY	MINED BY MACHINE		MINED BY HAND		SHOT OFF SOLID		Total Production	Material Washed or Coal Washed (Tons)	Cleaned Coal (Tons)	Refuse (Tons)	Percent- age of Cleaned Coal to Total Output
	Tonnage	Percent- age	Tonnage	Percent- age	Tonnage	Percent- age					
King.....	399,546	30.01	594,136	44.62	337,869	25.37	1,331,601	1,012,864	910,691	202,173	60.88
Kittitas.....	.....	.....	1,353,428	77.81	385,961	22.19	1,739,379	23,062	20,669	2,383	1.19
Lewis.....	12,969	7.42	12,036	7.41	148,727	85.17	174,621	55,345	47,355	7,990	27.34
Pierce.....	.....	.....	421,900	70.21	179,057	29.79	600,917	881,255	586,337	292,918	97.90
Skagit.....	.....	.....	5,307	100.00	.....	.....	5,307	.....	.....	.....	.....
Thurston.....	.....	.....	.....	.....	271,406	100.00	271,406	.....	.....	.....	.....
Whatcom.....	.....	.....	3,689	80.14	914	10.86	4,603	4,530	3,689	900	80.14
The State.....	412,504	9.90	2,391,996	57.95	1,323,924	32.06	4,128,424	1,977,135	1,470,771	506,364	35.62

TABLE SHOWING AMOUNT AND PERCENTAGES OF EXPLOSIVES USED, BY COUNTIES, 1918.

NAME OF COUNTY	BLACK POWDER		DYNAMITE		PERMISSIBLE EXPLOSIVES		Total Explosives (Pounds)	Tonnage of Companies Making Returns	Tonnage of Companies Not Making Returns	Total Tonnage Mined
	Pounds	Percentage	Pounds	Percentage	Pounds	Percentage				
King.....	100	0.03	265,709	73.06	97,900	26.91	363,709	1,935,751	65,850	1,331,601
Kittitas.....	377,710	50.04	11,215	1.43	385,885	48.43	754,780	1,729,149	10,230	1,739,379
Lewis.....	33,732	60.23	12,172	21.73	10,100	18.04	56,004	142,273	32,348	174,621
Pierce.....	.....	.....	133,556	70.66	55,486	29.34	189,041	600,917	.....	600,917
Skagit.....	.....	.....	1,300	100.00	.....	.....	1,300	5,897	.....	5,897
Thurston.....	135,325	100.00	.....	.....	.....	.....	135,325	270,435	.....	271,406
Whatcom.....	.....	.....	500	100.00	.....	.....	500	4,693	.....	4,693
The State.....	546,967	38.42	424,052	28.31	520,340	35.27	1,501,150	4,019,025	100,300	4,128,424

TABLE SHOWING NAME OF COMPANY AND MINE, KIND OF OPENING AND VENTILATION DATA, 1918.

NAME OF OPERATOR AND MINE	Kind of Opening	Method of Ventilation	Name of Fan	Power Used	Number of Spliffs	Total Number of Cubic Feet Per Minute Entering Mine	Number of Persons Employed Inside
KING COUNTY—							
Black River Coal Company, Black River.....	Drift and slope.....	Fan.....	Disc.....	Electric.....	1	.....	3
Central Coal Company, Grand Ridge.....	Slope.....	Fan.....	Western Blower.....	Electric.....	2	40,000	87
Carbon Coal & Clay Company, Carbon.....	Drift.....	Fan.....	Stevens.....	Steam.....	1	10,000	66
Carbon Coal & Clay Company, Day.....	Slope.....	Fan.....	Stevens.....	Steam.....	3	26,000	81
Denny-Renton Clay & Coal Company, Taylor.....	Shaft.....	Fan.....	Sirocco.....	Steam.....	4	33,000	81
Denny-Renton Clay & Coal Company, No. 1.....	Drift.....	Fan.....	Home-made.....	Steam.....	1	7,000	70
Durham Colliery Company, No. 1 Mine.....	Drift.....	Fan.....	Sirocco.....	Electric.....	1	15,000	74
Durham Colliery Company, No. 2 Mine.....	Drift.....	Fan.....	Sirocco.....	Electric.....	1	7,000	40
Hyde Coal Company, Hyde Mine.....	Slope.....	Fan.....	American Blower.....	Electric.....	3	20,000	42
National Coal Company, No. 6 Mine.....	Slope.....	Fan.....	Stine.....	Electric.....	2	14,000	323
Ozark Coal Mining Company, Navy Mine.....	Drift and slope.....	Fan.....	Exeter.....	Steam.....	9	71,500	306
Pacific Coast Coal Company, No. 11 Mine.....	Slope.....	Fan.....	Sullivan.....	Steam.....	7	81,000	77
Pacific Coast Coal Company, Ford Mine.....	Slope.....	Fan.....	Home-made.....	Steam.....	2	46,000	190
Pacific Coast Coal Company, Cannon Mine.....	Slope.....	Fan.....	Sirocco.....	Electric.....	3	50,750	197
Pacific Coast Coal Company, Issaquah Mine.....	Drift.....	Fan.....	Sirocco.....	Electric.....	2	28,500	33
Renton Coal Company, Renton Mine.....	Slope.....	Fan.....	Mattewan.....	Electric.....	1	17,500	12
Pocahontas Coal & Coke Company, Pocahontas.....	Drift.....	Fan.....	Sturtevant.....	Electric.....	1	11,000	10
Raven Coal Company, Ravensdale.....	Drift.....	Natural.....	.....	.....	.....	.....	.....
Cumberland Coal Mining Company, Eureka.....	Slope.....	Fan.....	.....	Electric.....	1	.....	.....
KITTITAS COUNTY—							
Independent Coal Company, Queen Mine.....	Slope.....	Fan.....	Western Blower.....	Electric.....	3	11,880	127
Northwestern Improvement Company, No. 6 Mine.....	Incline and drift.....	Small fans.....	.....	Electric.....	.....	.....	250
Northwestern Improvement Company, No. 3 Mine.....	Incline and slope.....	Fan.....	Sirocco.....	Steam.....	7	70,000	248
Northwestern Improvement Company, No. 5 Mine.....	Slope.....	Fan.....	Robinson.....	Steam.....	6	96,750	183
Northwestern Improvement Company, No. 7 Mine.....	Slope.....	Fan.....	Sirocco.....	Steam.....	6	74,000	242
Northwestern Improvement Company, Cle Elum.....	Incline.....	Natural.....	.....	.....	Open work.....	.....	29
Roslyn Cascade Coal Company, No. 1 Mine.....	Incline.....	Fan.....	Cyclone.....	Steam.....	1	10,800	36
Roslyn Cascade Coal Company, No. 2 Mine.....	Slope.....	Fan.....	Cyclone.....	Steam.....	4	31,000	39
Roslyn Coal & Coke Company, Plant Mine.....	Slope.....	Fan.....	Blower.....	Gasoline.....	2	8,500	23
Roslyn Fuel Company, No. 1 Mine.....	Slope.....	Fan.....	Jeffery.....	Steam.....	3	42,000	62
Roslyn Fuel Company, No. 3 Mine.....	Slope.....	Fan.....	Hine.....	Electric.....	5	21,400	54
Roslyn Fuel Company, No. 2 Mine.....	Slope.....	Fan.....	Sirocco.....	Electric.....	5	31,000	80
Roslyn Fuel Company, Summit Mine.....	Drift.....	Fan.....	Stine.....	Steam.....	1	8,000	23
Gwin & Gallagher, Bay Bee Mine.....	Slope.....	Fan.....	Stelway.....	Electric.....	1	14,700	17
Northwestern Improvement Company, No. 7 Ext.....	Incline.....	Fan.....	Sirocco.....	Steam.....	5	64,100	.....
Northwestern Improvement Company, No. 2 Ronald.....	Slope.....	Fan.....	Sirocco.....	Electric.....	3	47,400	.....
Northwestern Improvement Company, No. 8 Mine.....	Incline.....	Fan.....	.....	.....	.....	.....	.....

TABLE SHOWING NAME OF COMPANY AND MINE, KIND OF OPENING AND VENTILATION DATA, 1918.—Concluded.

NAME OF OPERATOR AND MINE	Kind of Opening	Method of Ventilation	Name of Fan	Power Used	Number of Splits	Total Number of Cubic Feet of Air Per Minute Entering Mine	Number of Persons Employed Inside
LEWIS COUNTY—							
Monarch Coal Company, Monarch Mine.....	Drift.....	Fan.....	Dexter.....	Comp. air	1	11,000	23
Centralia Coal Mining Company, Empress.....	Shaft.....	Fan.....	Home-made.....	Steam.....	1	6,840	12
Ford's Prairie Coal Company, Ford's Prairie.....	Slope.....	Fan.....	Stein.....	Steam.....	1	9,384	11
Mendota Coal & Coke Company, No. 1.....	Slope.....	Fan.....	Crawford & McKinnon.....	Steam.....	3	31,000	62
Olympia Coal & Mining Company, Packwood.....	Slope.....	Natural.....	.....	.....	1	.....	8
Phoenix Coal Company, Ladd Mine.....	Drift.....	Fan.....	Stein.....	Steam.....	1	30,000	27
Salzer Valley Coal Company, Salzer Valley.....	Slope.....	Natural.....	.....	.....	1	.....	2
Sheldon Coal Company, Sheldon Mine.....	Slope.....	Fan.....	.....	.....	1	5,000	10
Superior Coal Company, No. 2 Mine.....	Slope.....	Fan.....	American Blower.....	Electric.....	1	8,780	19
PIERCE COUNTY—							
Carbon Hill Coal Company, New No. 9.....	Drift.....	Fan.....	Sirocco.....	Electric.....	1	5,000	237
Carbon Hill Coal Company, Wingate.....	Slope.....	Fan.....	Capell.....	Steam.....	1	18,880	
Carbon Hill Coal Company, Melmont.....	Drift.....	Natural.....	.....	.....	1	.....	
Carbon Hill Coal Company, Douty.....	Drift.....	Fan.....	Jeffrey.....	Steam.....	2	13,800	287
Carbon Hill Coal Company, Carbon No. 6.....	Drift.....	Fan.....	Sirocco.....	Electric.....	1	15,000	
Carbon Hill Coal Company, Carbon No. 10.....	Drift.....	Fan.....	Sirocco.....	Electric.....	1	10,800	
Carbon Hill Coal Company, Miller Mine.....	Slope.....	Fan.....	Capell.....	Steam.....	1	6,000	88
Fairfax Mine, Inc., Fairfax Mine.....	Drift.....	Fan.....	Sirocco.....	Electric.....	2	11,000	
Gale Creek Coal Mine Company, Gale Creek.....	Slope.....	Fan.....	Sirocco.....	Electric.....	2	25,000	56
Pacific Coast Coal Company, Burnett.....	Slope.....	Fan.....	Capell.....	Electric.....	4	50,000	210
South Willis Coal Company, No. 8.....	Drift.....	Fan.....	Small Blower.....	Electric.....	1	4,860	79
South Willis Coal Company, No. 7.....	Drift.....	Fan.....	Small Blower.....	Electric.....	1	17,160	
South Willis Coal Company, Winsor.....	Slope.....	Fan.....	Blower.....	Electric.....	1	4,900	
Wilkeson Coal & Coke Company, Wilkeson.....	Drift.....	Fan.....	Sirocco.....	Electric.....	3	38,000	115
THURSTON COUNTY—							
Washington Union Coal Company, Tono No. 1.....	Slope.....	Fan.....	Crawford & McKinnon.....	Steam.....	8	48,500	123
Richmond Coal Company, Bucoda Mine.....	Drift.....	Natural.....	.....	.....	1	.....	8
SKAGIT COUNTY—							
Cokedale Coal Company, Cokedale.....	Drift.....	Fan.....	Sirocco.....	Electric.....	1	10,000	16
WHATCOM COUNTY—							
Whatcom County Coal Company.....	Drift.....	Fan.....	Home-made.....	Water.....	1	3,500	5
Bellingham Coal Mining Company, Bellingham.....	Shaft and slope.....	Fan.....	Western Blower.....	Steam.....	1	4,000	21

TABLE SHOWING NAMES OF OPERATORS AND MINES, SYSTEM OF WORKING, NUMBER HAULAGE LOCOMOTIVES, AND LIGHTING SYSTEMS.

NAME OF OPERATOR AND MINE	System of Working	Horses and Mules	HAULAGE LOCOMOTIVES				Kind of Light Used	Number of Oil Safety Lamps	Number of Electric Safety Lamps
			Steam	Electric	Storage Battery	Gasoline			
KING COUNTY—									
Black River Coal Company, Black River.....	Room and pillar.....	.....	.....	.....	.....	.....	Open flame.....	.....	.....
Cumberland Coal Mining Company, Eureka.....	Breast and pillar.....	1	.....	.....	.....	.....	Open flame.....	.....	.....
Central Coal Company, Grand Ridge.....	Room and pillar.....	4	.....	2	.....	.....	Open flame.....	.....	.....
Carbon Coal & Clay Company, Carbon.....	Room and pillar.....	.....	.....	2	.....	.....	Open flame.....	.....	.....
Carbon Coal & Clay Company, Daly.....	Room and pillar.....	.....	.....	2	.....	.....	Safety lamp.....	29	80
Denny-Renton Clay & Coal Company, Taylor Shaft.....	Chute and pillar.....	.....	.....	1	.....	.....	Open flame.....	.....	.....
Denny-Renton Clay & Coal Company, No. 1 Mine.....	Chute and pillar.....	1	.....	1	.....	.....	Open flame.....	.....	.....
Durham Colliery Company, No. 1 Mine.....	Chute and pillar.....	4	.....	.....	1	.....	Safety lamp.....	2	65
Durham Colliery Company, No. 2 Mine.....	.....	4	.....	.....	.....	.....	Safety lamp.....	2	60
Hyde Coal Company, Hyde.....	Chute and pillar.....	7	.....	.....	.....	.....	Safety lamp.....	24	100
National Coal Company, No. 6 Mine.....	Chute and pillar.....	6	1	.....	.....	.....	Safety lamp.....	.....	100
Ozark Coal Mining Company, Navy.....	Room and pillar.....	2	.....	.....	.....	1	Open flame.....	.....	.....
Pacific Coast Coal Company, No. 11.....	Room and pillar.....	3	.....	8	.....	.....	Safety lamp.....	40	415
Pacific Coast Coal Company, Ford.....	Chute and pillar.....	.....	.....	10	.....	1	One section, safety lamp.....	8	65
Pacific Coast Coal Company, Cannon.....	Room and pillar.....	2	.....	3	.....	.....	Safety lamp.....	24	50
Pacific Coast Coal Company, Issaquah.....	Chute and pillar.....	1	.....	2	.....	.....	Open flame.....	.....	.....
Renton Coal Company, Renton.....	Chute and pillar.....	24	.....	1	.....	.....	Open flame.....	.....	.....
Pocahontas Coal & Coke Company, Pocahontas.....	Room and pillar.....	5	.....	.....	.....	.....	Safety lamp.....	3	45
King County .....	.....	04	1	32	1	2	.....	132	980
KITTITAS COUNTY—									
Independent Coal & Coke Company, Queen.....	Room and pillar.....	5	.....	.....	1	.....	Safety lamp.....	.....	150
Northwestern Improvement Company, No. 6.....	Room and pillar.....	9	.....	5	.....	.....	Open flame.....	.....	.....
Northwestern Improvement Company, No. 3.....	Room and pillar.....	4	.....	3	.....	.....	Safety lamp.....	.....	184
Northwestern Improvement Company, No. 5.....	Room and pillar.....	2	.....	9	.....	.....	Safety lamp.....	.....	237
Northwestern Improvement Company, No. 7.....	Room and pillar.....	1	.....	6	.....	.....	Safety lamp.....	.....	224
Northwestern Improvement Company, Ole Elum.....	Room and pillar.....	1	.....	1	.....	.....	Open flame.....	.....	.....
Roslyn Cascade Coal Company, No. 1.....	Room and pillar.....	3	.....	.....	.....	.....	Open flame.....	.....	.....
Roslyn Cascade Coal Company, No. 2.....	Room and pillar.....	4	.....	.....	.....	.....	Safety lamp.....	.....	60
Roslyn Coal & Coke Company, Plant.....	Room and pillar.....	.....	.....	.....	.....	.....	Open flame.....	.....	.....

TABLE SHOWING NAMES OF OPERATORS AND MINES, SYSTEM OF WORKING, NUMBER HAULAGE LOCOMOTIVES, AND LIGHTING SYSTEMS.—Continued.

NAME OF OPERATOR AND MINE	System of Working	Horses and Mules	HAULAGE LOCOMOTIVES				Kind of Light Used	Number of Oil Safety Lamps	Number of Electric Safety Lamps	
			Steam	Electric	Storage Battery	Cable- line				
KITTITAS COUNTY (Concluded)—										
Roslyn Fuel Company, No. 1.....	Room and pillar.....	2					Safety lamp.....	6	30	
Roslyn Fuel Company, No. 2.....	Room and pillar.....	5					Safety lamp.....	8	53	
Roslyn Fuel Company, No. 3.....	Room and pillar.....	4					Open flame.....			
Roslyn Fuel Company, Summit.....	Room and pillar.....	2					Open flame.....			
Gwynn & Gallagher, Busy Bee.....	Development.....	1					Safety lamp.....		10	
Northwestern Improvement Co., No. 7 Ext.....	Room and pillar.....	8		2			Open flame.....			
Northwestern Improvement Company, No. 2, Ronald.....	Room and pillar.....			3			Open flame.....			
Northwestern Improvement Company, No. 8 Mine.....	Room and pillar.....				3		Open flame.....			
Kittitas County		55		29	4			14	888	
LEWIS COUNTY—										
Monarch Coal Company, Monarch.....	Room and pillar.....	2					Open flame.....			
Centralia Coal Mining Company, Empress.....	Room and pillar.....	2					Open flame.....			
Ford's Prairie Coal Company, Ford's Prairie.....	Room and pillar.....	1					Open flame.....			
Mendota Coal & Coke Company, No. 1.....	Room and pillar.....	6					Open flame.....			
Olympia Coal Mining Company, Packwood.....	Room and pillar.....	3					Open flame.....			
Phoenix Coal Company, Ladd.....	Chute and pillar.....		2				Safety lamp.....	48	25	
Salzer Valley Coal Company, Salzer Valley.....	Room and pillar.....	1					Open flame.....			
Sheldon Coal Company, Sheldon.....	Room and pillar.....	1		1			Open flame.....			
Superior Coal Company, No. 2.....	Chute and pillar.....	1					Open flame.....			
Lincoln Coal Mining Company, Lincoln.....	Room and pillar.....	2					Open flame.....			
Lewis County		19	2	1				48	25	
PIERCE COUNTY—										
Carbon Hill Coal Company, New No. 9.....	Chute and pillar.....			1			Safety lamp.....		20	
Carbon Hill Coal Company, Miller.....	Longwall.....			1			Safety lamp.....	3	10	
Carbon Hill Coal Company, Wingo.....	Breast and pillar.....	1		1			Safety lamp.....	4	40	
Carbon Hill Coal Company, Dooty.....	Chute and pillar.....			2	1		Open flame.....			
Carbon Hill Coal Company, Carbon No. 6.....	Breast and pillar.....			1			Safety lamp.....	3	40	
Carbon Hill Coal Company, Carbon No. 10.....	Chute and pillar.....	1		1			Safety lamp.....	4	27	
Carbon Hill Coal Company, Melmont.....	Chute and pillar.....	2					Open flame.....			
Fairfax Mine, Inc., Fairfax.....	Chute and pillar.....			3			Safety lamp.....		52	
Gale Creek Coal Mining Company, Gale Creek.....	Chute and pillar.....	3		1			Open flame.....			

TABLE SHOWING NAMES OF OPERATORS AND MINES, SYSTEM OF WORKING, NUMBER HAULAGE LOCOMOTIVES, AND LIGHTING SYSTEMS.—Concluded.

NAME OF OPERATOR AND MINE	System of Working	Horses and Mules	HAULAGE LOCOMOTIVES				Kind of Light Used	Number of Oil Safety Lamps	Number of Electric Safety Lamps
			Steam	Electric	Storage Battery	Gasoline			
PIERCE COUNTY (Concluded)—									
Pacific Coast Coal Company, Burnett.....	Room and pillar{ Chute and pillar}	1		6			Safety lamp..		210
South Willis Coal Company, No. 8 and Winsor.....	Chute and pillar..	1		2			Open flame..		
South Willis Coal Company, No. 7.....	Chute and pillar..	2	3	2	2		Open flame..		
Wilkeson Coal & Coke Company, Wilkeson.....	Chute and pillar..						{Safety lamp..	100	100
Pierce County		11	3	21	3			114	499
SKAGIT COUNTY—									
Cokedale Coal Company, Cokedale.....	Chute and pillar..	2					Safety lamp..	9	
Skagit County		2						9	
THURSTON COUNTY—									
Washington Union Coal Company, Tono No. 1.....	Room and pillar..	10				1	Open flame..		
Richmond Coal Company, Bucoda.....	Room and pillar..						Open flame..		
Thurston County		10				1			
THE STATE		161	6	83	8	3		317	2,392

COAL AND COKE IMPORTS AND EXPORTS TO AND FROM THE PORT OF TACOMA IN LONG TONS, 1900-1918.*

YEAR	COAL						COKE			
	IMPORTS			EXPORTS			IMPORTS		EXPORTS	
			Value	Coastwise and Domestic		Foreign				
	Tonnage†			Tonnage	Value		Tonnage	Value	Tonnage	Value
1900:	.....									
1901:	.....						624,544	\$1,067,377	.....	.....
1902:	.....						636,106	2,003,734	.....	.....
1903:	.....						370,434	1,166,867	.....	.....
1904:	.....						401,596	1,548,527	.....	.....
1905:	.....						444,165	1,399,120	.....	.....
1906:	.....						235,612	.....	.....	.....
1907:	.....						†124,230	.....	.....	.....
1908:	.....						134,711	.....	.....	.....
1909:	.....						106,151	.....	.....	.....
1910:	.....						89,180	.....	.....	.....
1911:	7,080						47,829	.....	.....	.....
1912:	4,322						72,535	.....	.....	.....
1913:	.....			105,011	\$497,496	.....	131,306	616,524	.....	.....
1914:	.....			90,654	867,433	26,295	151,241	614,827	.....	.....
1915:	.....			15,100	76,223	60,587	44,930	190,823	.....	.....
1916:	703	\$2,812		.....	.....	29,830	114,603	.....	.....	.....
1917:	‡ 432	2,592		.....	.....	.....	57,452	215,755	.....	.....
1918:	‡ 7,304	36,315		.....	.....	.....	66,071	320,018	.....	.....
	‡ 1,500	9,000		.....	.....	.....	90,183	452,465	.....	.....
				.....	.....	.....	102,643	618,139	.....	.....
									24,164	\$133,148
									38,720	216,508
									20,920	116,491
									11,407	112,355

* Compiled from Mine Inspector's Reports and statements furnished by the Harbormaster, Port of Tacoma.

† For nine months only

‡ From British Columbia.

NEW EQUIPMENT AND DEVELOPMENT WORK FOR THE YEAR 1918.**KING COUNTY.****Black River Coal Company, Earlington.**

Has driven 500 feet of gangway and 100 feet of slope. Beginning about January 1, 1919, has under construction a new 300-ton bunkers and is driving a new slope, equipping it modern.

Carbon Coal & Clay Company, Bayne.

Has driven 640 feet of No. 3 gangway in Carbon mine, and 750 feet of rock tunnel to pick up No. — seam from Carbon No. 3 water level gangway. Seam not yet reached.

Central Coal Company, Issaquah.

Has driven 750 feet of gangway on No. 9 vein, 500 feet of gangway on No. 3 vein, 270 feet of gangway on No. 7 vein and 912 feet of gangway on No. 1 vein. Opened up 1,200 feet of old gangway.

Has installed one 75-kilowatt generator, one 6-ton electric locomotive, one revolving tippie and one 50-inch Western Blower fan. Reopened tunnel and gangway to face of No. 7 vein, a total of 2,000 feet.

Cumberland Coal Mining Company, Cumberland.

Has driven 125 feet of gangway and 300 feet of slope.

Has installed one electric hoist, one air compressor, two washers, one crusher. Installation of electric power.

Reclamation of old workings of the Eureka property.

Durham Colliery Company, Durham.

Has driven 613 feet on No. 1 gangway and 580 feet on No. 2 gangway.

Hyde Coal Company, Cumberland.

Has driven 3,104 feet of gangway and 299 feet of rock tunnel. The only new opening is the rock tunnel driven from the McKay seam to Hyde No. 12 seam on second level.

McQuade Prospect, Cedar Mountain.

Has driven 200 feet of gangway and 250 feet of slope.

National Coal Company, Cumberland.

Has driven 1,695 feet of gangway, 77½ feet of slope and 63 feet of rock tunnel.

Has installed one new steam pump, 4" discharge line, 200 gallons per minute; one new 1¼" plow steel cable for hoist, 1,200 feet long.

Northwestern Improvement Company, Hiawatha.

Has driven 488 feet of gangway on Upper Mammoth north and 141 feet of gangway on Upper Mammoth south. Has driven 755 feet of air chute and cross cuts and 1,282 feet of rock in main tunnel. This tunnel is in a total distance from mouth of 3,965 feet.

Ozark Coal Mining Company, Cumberland.

Has driven 1,200 feet of gangway.

Pacific Coast Coal Company.

At Mine No. 11, Black Diamond, Big vein, has driven 160 feet of gangway on 10th level north, 400 feet of gangway on 7th level north, 1,200 feet of gangway on 11th level north and 670 feet of gangway on 11th level south. Little Vein has driven 1,730 feet of gangway on 9th level north.

At Ford mine, New Castle, has driven 50 feet of gangway on No. 4 vein, 3rd level east; 2,110 feet of gangway on Muldoon seam, 4th level east, and 2,371 feet on Muldoon seam, 4th level west. Has also installed new washing plant.

Cannon mine, Pacosco, has driven 752 feet of gangway on McKay seam, 2nd level south; 198 feet of gangway on McKay seam, 3rd level south; 212 feet of gangway on McKay seam, 3rd level north. Has driven 550 feet of slope from 1st level to 2nd level.

Issaquah mine, Issaquah, has driven 713 feet of gangway on Upper Bagley, 808 feet of gangway on Lower Bagley, 580 feet of gangway on May Creek and 160 feet of gangway on Muldoon.

Pocahontas Coal & Coke Company, Palmer.

Has driven 500 feet of gangway. Has installed one 8 x 8 Union compressor and receiver 36" x 96". One Ingersoll-Rand jack-hammer.

Renton Coal Company, Renton.

Has driven 7,560 feet of gangway and 225 feet of slope. Completion of new coal handling machinery on surface to replace bunkers burned late in 1917. Foundations and opening and partial construction for a new Jeffrey mine ventilating fan have been undertaken, expecting to complete them in April, 1919.

KITTITAS COUNTY.**Independent Coal & Coke Company, Cle Elum.**

Has driven entry as follows: 505 feet in 2nd east; 1,420 feet in 3rd east; 560 feet in 4th east; 437 feet in 2nd west; 1,042 feet in 3rd west and 318 feet in 4th west; a total of 4,282 feet of entry. Has driven 245 feet of slope. Has installed 6W Jeffrey fan run by 25 h. p. Westinghouse induction, constant speed, motor. Rock airway driven to outside.

Northwestern Improvement Company.

At Mine No. 6, Roslyn, has driven 976 feet of rope entry, and entry as follows: 136 feet in 10th east slant; 355 feet in 11th east entry; 535 feet in 12th east entry; 599 feet in 11th west entry; 605 feet in 12th west; 701 feet in 13th west; 116 feet in No. 1 rope entry; 250 feet in 1st east and 358 feet in 2nd east; a total of 3,656 feet of entry.

Has installed 125 h. p. electric hoist to replace 50 h. p. hoist, and re-installed 50 h. p. hoist at No. 1 mine. Installed 80 h. p. electric hoist at No. 1 mine.

At Mine No. 8, Roslyn, has driven 988 feet of rope entry, and entry as follows: 1,197 feet in 1st east; 1,178 feet in 1st west; 829 feet in 11th west; 314 feet in 2nd east and 257 feet in 1st level tunnels; a total of 3,775 feet of entry. Has installed 75,000 cu. ft. min. 2½" W. G. Sirocco full housed fan, belted to 50 h. p. motor. Installed 50 h. p. A. C. 220-volt hoist.

Installed one storage battery locomotive, 6-ton. Installed 25,000 gallon wood tank and 900 feet 4-inch pipe line with suitable hydrants for fire protection.

At Mine No. 3, Ronald, has driven 369 feet of main slope, and entry as follows: 718 feet in 7th east; 380 feet in 8th east; 880 feet in 9th east; 61 feet in 10th east; 548 in 8th west and 168 in 9th west; a total of 2,755 feet of entry.

No. 3 new mine, Ronald, has driven 711 feet of main slope and entry as follows: 1,016 feet in 1st east; 1,812 feet in 2nd east; 784 feet in 2nd west; 1,045 feet in 3rd east; 300 feet in 4th east; 913 feet in 3rd west; 206 feet in 3rd level crossovers; 185 feet in 4th west; 58 feet main return to fan; a total of 6,319 feet of entry. Has installed 150,000 cu. ft. min. Sirocco fan to work up to 3" W. G. direct connected to 17"x24" Ball engine. Above installed in concrete fan and engine house. 150 h. p. B. & W. water tube boiler at No. 3 complete with Jones underfeed stoker. Diamond soot blowers on four boilers. New 6-inch pipe line from 1st to 4th level. 150 G. P. M. triplex pump at 2nd level. Built new tippie approach for loads and empties.

At No. 5 mine, Roslyn, has driven entry as follows: 1,124 feet in 8th east; 1,302 feet in 9th east; 748 feet in 8th west; 50 feet in 5th east dip counter; 326 in 8th east counter No. 4; a total of 3,550 feet of entry.

At No. 7 mine, Cle Elum, had driven 393 feet of main slope; 104 feet of No. 20 incline and 1,090 feet of high line incline; a total of 1,587 feet and entry as follows: 617 feet in 7th east; 448 feet in 8th east; 45 feet in 1st left off high line entry; 441 feet in 1st right off No. 20; 100 feet in 2nd right off No. 20; 420 feet in 1st west off No. 20; 316 feet in 2nd west off No. 20; 1,352 feet in 3rd west off No. 20; 21 feet in 8th west; 1,547 feet in 9th west; a total of 5,307 feet of entry.

At No. 7 extension, Cle Elum, has driven 6,823 feet of entry as follows: 484 feet in 4th west; 1,029 feet in 6th west; 21 feet in 7th west; 738 feet in 8th west; 337 feet in 9th west; 556 feet in 3rd east; 598 feet in 4th east; 477 feet in 5th east; 682 feet in 6th east; 843 feet in 7th east; 537 feet in 8th east; 171 feet in 9th east; 350 feet in 10th east; a total of 6,824 feet of entry. Has installed 300 h. p., 2200-volt, electric hoist with 6'x6' drum to handle 16-car trips to tippie; 25,000-gallon wood tank for boiler feed water and fire protection.

Roslyn-Cascade Coal Company, Ronald.

At Mine No. 1, has driven 488 feet of entry on 3rd east and 873 feet on 3rd west; a total of 1,361 feet of entry.

Mine No. 2, Ronald, has installed one 3 x 6 two-stage Krogh turbine pump. Direct connected to 30 h. p. Wagner motor, capacity 250 gallons at 300-inch head.

Roslyn Coal & Coke Company, Lakedale.

At No. 2 mine, Lakedale, has driven 231 feet of entry and 217 feet of slope (slant).

Roslyn Fuel Company, Lakedale.

At Mine No. 3, has driven 941 feet of slope and entry as follows: 1,507 feet in 1st east; 860 feet in 2nd east; 643 feet in 1st west; 879 feet in 2nd west; a total of 3,889 feet of entry. Has installed 6-foot Stine fan, rated 30,000 cu. ft. per minute. New rock slope started and driven 76 feet.

LEWIS COUNTY.**Centralia Coal Mining Company, Centralia.**

At Empress mine, Centralia, has driven 403 feet of gangway. Has installed one 20 h. p. Shaker engine.

Ford's Prairie Coal Company, Centralia.

Has driven 200 feet of gangway. 300 feet of plane.

Lincoln Coal Mining Company, Galvia.

Has driven 700 feet of gangway.

Mendota Coal & Coke Company, Mendota.

Has driven 2,345 feet of entry; 1,202 feet of cross cuts and 700 feet of slope. Has installed a new hoist—16 x 32 double cylinder first motion. Two new boilers, 66 x 16. New slope into present working vein—slope down 700 feet.

Monarch Coal Mining Company, Kopiah.

Has driven 408 feet of gangway and 220 feet of slope. Has installed shaker screens and engine to run shaker.

Olympia Coal & Mining Company, Packwood.

Has driven 700 feet of entry.

Phoenix Coal Company, Ladd.

Has driven 582 feet of gangway. Has installed one Ingersoll-Rand air compressor and drill.

Superior Coal Company, Chehalis.

Has driven 171 feet of gangway. Has installed electric hoist; electric locomotive; electric conveyor and electric blacksmith drill.

Widening all track from 30 to 32 and replacing track with 30-lb. rails.

PIERCE COUNTY.**Carbon Hill Coal Company, Carbonado.**

At Melmont mine, has driven 382 feet of gangway.

At Carbon No. 6 mine, has driven 700 feet of gangway.

At Douty mine, has driven 67 feet of gangway in rock.

At Miller mine, has driven 749 feet of entry in rock under coal seam.

At Wingate mine, has driven 92 feet of entry in rock under coal seam.

At New No. 9, has driven 1,044 feet of gangway.

At Carbon No. 10 mine, has been driven 173 feet of slope, 282 feet driven in coal only. There has been 120 feet of rock tunnel driven west and 701 feet driven east off Carbon No. 10 (old No. 5).

Fairfax Mine, Incorporated.

Has driven 2,300 feet of gangway.

Gale Creek Coal Mines Company, Wilkeson.

Has driven 718 feet of gangway. Mine abandoned end of October, 1918.

Pacific Coast Coal Company, Burnett.

Has driven 863 feet in No. 2 seam east dip east of fault, 3rd level south; 600 feet in No. 3 seam east dip east of fault, 3rd level south; 455 feet in No. 3 seam east dip east of fault, 3rd level north, and 345 feet in No. 4 seam east dip east of fault, 3rd level north. Has installed new sprinkling system.

South Willis Coal Company, Morristown.

No. 10 mine has driven 525 feet of slope and gangway as follows: 1,540 feet on No. 7; 900 feet on No. 8; 400 feet on No. 10; a total of 2,840 feet of gangway. Has installed one fan at No. 7 mine; one fan at No. 10 mine; one steam hoist at No. 10 slope; one electric pump in No. 10 slope; two electric haulage motors; one steam locomotive and one steam hoist for rock dump.

Wilkeson Coal & Coke Company, Wilkeson.

Has driven 584 feet of gangway.

SKAGIT COUNTY.**Cokedale Coal Company, Cokedale.**

Has driven 260 feet of entry on East Klondyke; 450 feet of entry on West Klondyke. Has installed electric power plant; fifty thousand capacity multiblade fan, electric driven; one jig washer; railroad into mine.

THURSTON COUNTY.**Washington Union Coal Company, Tono.**

Has driven 1,939 yards of gangway. Has installed one 16 x 42 Corlis engine and 150 kw. generator.

WHATCOM COUNTY.**Bellingham Coal Mines, Bellingham.**

Has driven 150 feet of gangway, 130 feet of slope thru earth and 150 feet of slope thru coal; 276 feet of shaft. Has installed three hoists, three air compressors, one engine and generator, one engine and ventilating fan.

**DETAILED SYNOPSIS OF FATAL ACCIDENTS OCCURRING IN THE
STATE OF WASHINGTON FOR THE YEAR 1918.**

January 5.—Mendota Coal & Coke Company, Mendota mine, Mendota: Alfred A. Shahan, nationality American, age 42 years, occupation miner, single. Instantly killed in his working place in the Mendota mine. He was sounding the roof near the face of the room when a large rock fell on him, killing him instantly. More care on the part of the deceased would have prevented this accident.

January 16.—Carbon Hill Coal Company, Wingate mine, Carbolado: Axel Robertson, nationality Finn, age 25 years, occupation cager, single. Instantly killed on the Wingate slope by a runaway trip. Robertson and his partner were going down the slope on the man car when an empty trip, which was standing on the top, was caught by the rope which pulled it over the knuckle. Robertson was caught in the wreckage and instantly killed. This accident could have been avoided by more care on the part of the top cagers.

February 2.—Northwestern Improvement Company, No. 6 mine, Roslyn: W. J. Foulkes, nationality English, age — years, occupation miner, married. Instantly killed in his working place No. 57 pillar, 9th level, No. 6 mine. Foulkes was preparing to set a prop under a loose piece of cap rock when it fell on him, killing him instantly. More care on the part of the deceased would have prevented this accident. The deceased leaves a widow.

February 7.—Hyde Coal Company, Hyde mine, Cumberland. John Umick, nationality Austrian, age 39 years, occupation miner, married. Killed by being caught in a cave in No. 14 pillar, No. 12 seam. Umick and partner were working on a skip above the 4th crosscut. The place was open for about 75 feet above him. It caved without warning, coming through the battery above him, catching him near the chute as he tried to get out.

The only way such accidents can be avoided is to put in batteries that will hold when the cave comes. The deceased leaves a widow and six children.

February 20.—Washington Union Coal Company, Tono No. 1 mine, Tono: Alfred Jones, American, age 42 years, occupation miner, single; and Richard Williams, English, age 36 years, occupation miner, married; were caught in a cave in No. 1 room, LaBell entry, Tono No. 1 mine. Jones and Williams were loading top coal which had come down after the pillar had been taken out for a distance of about 100 feet back from the face. They had loaded the coal out for a distance of about 75 feet towards the face. A few small props had been set as they advanced. On the morning of the accident the foreman visited the place and the two miners assured him that they had examined the top and considered it safe to work under. About 30 minutes later a cave occurred, catching the two men under it. Williams was taken out soon after but died in the hospital one hour after he was taken out. Jones was instantly killed. His body was recovered about six hours later.

Recovering the top coal by this method is very dangerous to the miners and where it is recovered in the future a different system will be used. Williams leaves a widow and one child. Jones leaves two children.

February 26.—Northwestern Improvement Company, No. 8 mine, Roslyn: Charles Dollsek, nationality Austrian, age 38 years, occupation miner, single. Killed by being struck and run over by loaded trip on main inside incline, No. 8 mine. This mine is under development and the men were using the haulage road for a traveling way. The deceased was going home from work while the trips were running. On hearing the cars coming he became confused and stepped on the wrong track and was struck by the cars.

Injured June 8, 1918; died June 9.—South Willis Coal Company, Mine No. 7, Morristown: Charles Savicky, nationality Russian, age 45 years, occupation miner, married. Fatally injured by falling down the traveling way, No. 13 chute, from 6th crosscut to the counter below. Savicky, with other miners, was on his way to his working place. They entered the mine through the traveling way on the hill, Savicky in the lead. When they reached the 6th crosscut Savicky, who was wearing rubber shoes, lost his footing and fell down the manway, about 250 feet, receiving injuries from which he died the next morning.

The seam pitches about 65° in No. 13 chute. The manway was not in the best condition for traveling. This with the fact that Savicky had on rubber shoes accounts for the accident. Miners should not be allowed to wear rubber shoes on the pitch. The Local Union, at Morristown, passed a resolution to stop this practice after this accident occurred. The deceased leaves a widow and four children.

Injured June 13, 1918; died June 18.—Pacific Coast Coal Company, South 3 Burnett mine, Burnett: Mike Slemich, nationality Austrian, age 28 years, occupation miner, married. Fatally injured about 3 p. m. by a fall of top coal. The deceased was working in No. 20 breast and had completed the day's work and was sitting on a lagging about six feet from the face. His partner was sitting beside him. Without warning a piece of dirt, overlying the seam, fell from the face, striking him between his shoulders and caused injuries which resulted in his death.

The place was well timbered and as the men had been working all day at the face the accident appeared unavoidable. The seam pitches about 60°. He leaves a widow and two children.

July 1.—Wilkeson Coal & Coke Company, South No. 3, Wilkeson: Tony Stasiak, nationality Pole, age 31 years, occupation miner, married. Stasiak and his brother were working in No. 19 pillar and had started to cut the pillar through near the top; the angle being started below the 10th crosscut. A line of cogs had been placed near the face where the chute had been stopped. As they advanced with the skip and widened out, additional cogs were to be placed along the face. The foreman had visited the place that morning and ordered a cog placed near the face. Stasiak and brother were on the top line of cogs preparing to place the cog as ordered. The coal in this part of the mine works very freely and without warning began to run from the face. The men tried to reach the 11th crosscut which was opposite the top line of cogs. One of them reached it safely but the deceased was

caught in the coal and timber and instantly killed. Help was summoned and the body reached but before the men were able to get it out the place filled with coal. His body was recovered the following day.

This accident could have been prevented only by the carefulness of the men themselves. If they had gone below the cogs they would have been safe, for the cogs were placed there to protect them in such an emergency. The deceased leaves a widow and three children.

July 7.—Northwestern Improvement Company, Hiawatha mine, Hiawatha: Joseph Ripoli, nationality Italian, age 43 years, occupation blacksmith and machinist, married. Instantly killed by an explosion of gas on the evening of July 7, 1918, in the Hiawatha tunnel. Work had been stopped at the mine from the night of July 3rd to the following Monday, July 8th, and the fan stopped and mine mouth fenced off. The mine had made very little gas up to this time and it had been the custom to stop the fan over Sunday; Ripoli starting it Sunday evening so everything would be all right for the following morning. Ripoli followed his usual custom on this evening and started the fan about 7:30 p. m. After he had started the outside fan and it had run about 20 minutes he started in with the storage battery locomotive to start a small fan which ventilates the air chute, which was being driven to the outside. When about 1,300 feet in the tunnel he encountered a body of gas which was ignited by the haulage motor, as there was no evidence of his having an open light with him. It is thought that during the time the fan was shut down a body of gas had collected in the face of the tunnel as they had just reached a seam of coal the last day they worked and when the fan was started, the tunnel being the return, the body of gas was encountered by Ripoli as he went in with motor, causing the explosion.

This accident would not have occurred if anyone in authority had been at the mine. The superintendent was away during the shut-down and owing to unforeseen delay did not reach the mine before the fan was started or until after the explosion occurred. The lessons to be learned from this accident are that no fan should be stopped at any gaseous mine during a shut down of a few days. The section of the mining laws, in regard to this, is not clear and should be revised.

The Inspector wishes to commend the work of the employes of the Durham mine who, under the direction of Foreman Simpson, did such good work with the rescue apparatus in recovering the body of Ripoli. Ripoli leaves a widow and four children.

July 10.—Carbon Hill Coal Company, blacksmith shop at cleaning plant, Carbonado: Joe Metalak, nationality Austrian, age 28 years, occupation blacksmith helper, single. Fatally injured on July 10th. Metalak was the blacksmith helper at the shop located at the cleaning plant. The blacksmith and bunker foreman were planning some work and Metalak went up to oil the line shaft that operates the machinery in the shop. He did not stop the shaft as he should have done. While passing over the shaft the bottom of his overalls caught in a set screw on the shaft, tearing his clothes from his body and winding him around the shaft several times. He received injuries from which he died a few hours later.

This accident could have been prevented by stopping the machinery while being oiled. The machinery in the shop was idle at the time and he could have stopped it without delay to anyone. Superintendents are requested to take this matter up with the master mechanic and bunker foreman and see that all machinery, where there is any danger, is oiled before it is started. Also that all set screws that project from any machinery or line shafts should be covered by a guard, counter sunk or headless set screws used.

From one to two fatal accidents occur from this cause each year and your co-operation in preventing such accidents is requested.

July 26.—Carbon Hill Coal Company, Douty No. 9 mine, Carbonado: Felix Centenute, nationality Italian, age 26 years, occupation chute starter, single. Centenute had noticed some timber in No. 56 chute the evening before and he and the fireboss had gone down to remove it. The timber was below the 4th crosscut and Centenute had gone to fasten a rope on to it when the fireboss was to pull it up to the crosscut. While fastening the rope to a timber a large rock fell from the top above him, crushing him to the bottom and killing him instantly.

The prevention of such accidents is with the men themselves as they should take the safest way in removing timber from the chutes on this pitch. The testimony was that no one realized that there was any danger from loose top as it appeared to be safe. Chute starting is a dangerous occupation at best and the safest course should be followed at all times.

August 3.—Durham Colliery Company, No. 2 mine, Durham: Ike Whitehouse, age 44 years, single, American, occupation miner. Killed while working in No. 46 chute. About twelve feet of the seam is taken in the chute which is worked in two benches, the top coal being taken out first. In driving on the top coal a loose piece of top was encountered and a prop set to secure it. The face of the bench had advanced too near where the prop was set. At the time of the accident Whitehouse was taking off some coal at the face of the bench and it is thought he worked the coal off too close to the prop. The weight of the overhanging rock pushed it out, allowing the rock to fall which killed him instantly.

Accidents such as the above can only be prevented by the carefulness of the miners themselves.

August 17.—Carbon Coal & Clay Company, Carbon mine, Bayne. Mike Cinkovich, nationality Austrian, age 38 years, occupation miner, married. Killed in No. 32 pillar, 3rd water level. Cinkovich and partner were working on No. 32 pillar which was down about 100 feet from the top. Cinkovich was working below his partner taking off some coal above an old crosscut, when a large rock fell from the top, killing him instantly. There was a slip which plainly showed on one side of the rock and if timber had been placed under it as the coal was taken out this accident could not have happened. Plenty of timber was in the place at the time. It was just a case of the miner not using it when needed. The deceased leaves a widow.

August 28.—Pacific Coast Coal Company, Burnett mine, Burnett: An explosion occurred in South No. 3 seam, 3rd level, on the afternoon of August 28, 1918, at 4:20 p. m., by which twelve persons were killed and

three others seriously injured. One hundred and eighty-three persons were employed in the mine on the day of the explosion.

The main entrance to the mine is through a slope on No. 2 seam to the third level. A rock tunnel driven from No. 2 seam about 500 feet from the slope bottom and driven in the foot wall intersects Nos. 3 and 4 seams. All three seams were being worked at the time of the explosion. The mine was on safety lamps and all shots were fired by the fireboss. Gangways north and south are driven off the rock tunnel on No. 3 seam. Thirty-eight persons were employed in No. 3 south on the day of the explosion.

The pitch is about 50 degrees and the system of working was breast and pillar, the breasts being driven about 18 feet wide where conditions allowed it, with a manway on the rib side, wooden brattice between chute and manway to conduct the air to the face. In No. 3 south, breasts Nos. 18 and 27, inclusive, gangway, counter and No. 31 gangway chute, which was the inside place, were working on the day of the explosion. The fireboss fired the shots twice each day, at noon and between 4:00 and 4:30 p. m., which was quitting time.

At the time of the explosion the fireboss was making his last round and all the men working in that part of the mine had left their working places and all but the twelve killed and three injured had reached the rock tunnel leading from South 3, or had reached the slope bottom. Although the explosion was felt throughout the mine no one was injured excepting in South 3 gangway. It is thought that the explosion originated in No. 24 breast, South 3. Shots had been fired in most all the places from No. 18 into No. 24. No shots were fired in any of the working places inside of No. 24. The fireboss, who fired the shots, was found on the gangway between No. 31 chute and the face of the gangway. He had traveled that far after the shot had been lighted in No. 24, which was about 285 feet up the pitch from the gangway. The shot in No. 24 was in a crosscut which was about 17 feet back from the face. The shot was well mined and had done its work properly. The testimony of the miner who worked there was that two sticks of Monobel had been used. The miners in the place worked with electric lamps but did not have a safety lamp to test for gas but said they did not notice anything that would cause them to suspect gas was present when they left the place about 4:00 p. m.

The conclusion of nearly everyone who had made an investigation was that the shot in No. 24 must have caused the explosion for the following reason. The shots in the other places must have been ignited before the fireboss reached the point where he was found on account of the distance he had to travel after lighting them. That gas was present in No. 24 when the shot was lighted was the conclusion reached and it was thought that as there were no shots at the face of No. 24 the fireboss did not give it as careful an examination as he should. There is always a possibility in a gaseous mine ventilated on the gangway-counter system, of the loaders pulling the coal below the bulkhead, thereby short circuiting the air. This may have happened as two trips were loaded out of Nos. 19 and 21 chutes, between 3:00 and 4:00 p. m., and would account for the gas being present.

South 3 was not considered dusty. The gangway was wet and the pitch workings in most places were damp, but considerable dust was made by the coal running down the chutes. At the time of the explosion whatever dust

was present was in suspension on account of so many shots being fired and the men traveling down the manways at quitting time. When the gas was ignited whatever dust was present was held in suspension which accounts for the explosion being carried throughout the workings and to the gangway where it died out on account of the gangway being wet. The men who were killed near the junction of the rock tunnel were killed by the concussion and were not burned, for the flame did not reach that far.

The lessons to be learned from this accident are that the safety of a mine depends a great deal on all employed therein from the trappers to the officials and a great deal depends on the firebosses and shotlighters, especially in safety lamp mines where gas and dust are present, for if a careful examination is not made before shots are fired an accident such as the above can very easily occur. The system of firing shots at quitting time and having the shotlighter light them on the run as was done in Burnett is a very dangerous practice and should not be allowed, for men will be careless in their hurry to get through the places. A shotfirer who is allotted a certain time in which to fire shots generally requires the full time to do it properly. The practice of getting the shots fired and being able to leave the mine as soon as this is done is conducive to abuses in shotfiring and shotfirers should spend the allotted time in firing the shots in their district. If but few shots are fired, prolonging the time between shots is only liable to tend to greater safety. Wherever possible shooting should be done after the men leave the mine. Coal dust in gaseous mines, if only in small quantities, must be taken care of and the inspection department will order shooting stopped in all mines where this is not done.

The following is a list of the killed and injured:

NAME	Age	Married or Single	Nationality	Occupation	Orphans
Mike Sladoje	29	Single	Austrian	Miner	
Wm. Johnson	42	Married	Finn	Fireboss	10
Gus Fleisher	36	Married	American	Miner	3
Elie Tait	36	Married	Italian	Miner	2
Chas. Makkela	37	Married	Finn	Miner	1
Otto Makkela	33	Married	Finn	Miner	8
Tom Flemming	32	Single	Irish	Miner	
Dan Reese	52	Married	Welsh	Miner	2
Reese Jenkins	23	Single	Welsh	Miner	
Jacob Sippola	43	Married	Finn	Miner	5
Claudius Tomaczat	43	Single	French	Miner	
George Marich	28	Single	Austrian	Miner	

INJURED.—Martin McDonough, John Sertich and Steve Vurn.

September 30.—Hyde Coal Company, Hyde mine, Cumberland: George Shlapikas, age 36 years, single, nationality Lithuanian, occupation miner. Killed in No. 20 pillar, No. 12 seam, South 1st level. Shlapikas and partner were working on No. 20 pillar above the 5th crosscut. They had fired a shot and Shlapikas was mining off the loose coal. The pitch is about 72 degrees and the deceased miner was standing under a large piece of top coal. As he mined out the coal from underneath the top coal fell, killing him instantly. On a pitch as heavy as this the miner should never work below any loose material but above it.

This accident could have been prevented only by the carefulness of the miner himself.

Injured October 11, 1918; died October 18.—Northwestern Improvement Company, Mine No. 8, Roslyn: Yanko Yernich, nationality Austrian, age 33 years, occupation miner, single. Fatally injured by a fall of cap rock which resulted in his death two days later.

October 19.—South Willis Coal Company, Mine No. 7, Morristown. John Evans, American, age 23 years, occupation chute starter, single. Killed in No. 20 chute, on above date. Evans had gone up to run the battery at 1st crosscut in No. 20 chute. A little later the loader found his lamp and cap while loading and immediately went up to investigate. He found that the coal had been run out of the battery but could not find Evans. They loaded the coal out of the chute and found Evans about 20 feet below the 1st crosscut where he had been buried under the coal.

In driving chutes and crosscuts on No. 7 seam only part of the coal is taken which does not leave much head room. It is thought that in running the battery Evans lost his footing and fell down the chute where he was covered up by the fine coal and suffocated.

The inspector recommended that more head room be made at crosscuts where batteries are placed and props set below the crosscut so anyone working there would have a safe place to stand.

Injured and died October 26, 1918.—Northwestern Improvement Company, Mine No. 5, Roslyn: Marion Ozretich, nationality Austrian, age 40 years, occupation miner, married. Fatally injured by fall of rock while resetting timber in pillar workings. The deceased, his partner and two timbermen were retimbering and resetting timbers in Room 17, 5th east dip, preparatory to taking up a new skip on the pillar between 16 and 17 rooms. The deceased was resetting the timbers which were too close to the track in the room neck, the two timbermen were up at the face of the skip and his partner was on the entry when the accident occurred. It appears that the deceased thought a piece of rock which reached across the room neck was solid and he knocked out a prop supporting same and the rock came down causing injuries which resulted in his death.

This accident was one that could have been avoided if the deceased had set a temporary post under the rock and examined the roof more carefully before knocking out the timber. On reviewing accidents similar to this one it appears that when a pillar has to be retimbered the miners working in the place do not take the same precaution that a timberman does or miners who are not so familiar with the working place.

The deceased leaves a widow and five children.

Injured and died October 31, 1918.—Northwestern Improvement Company, Mine No. 5, Roslyn: George Clarkson, nationality American, age 20 years, occupation motorman, single. Fatally injured by being run over by loaded mine cars. The deceased was employed on the 7th east. The cars are gathered by an electric hoist at a parting at the inner end of the entry. This parting has a hill on same and it is necessary to pull the loaded cars with the motor by means of a chain about 12 feet long which is fastened to the side of the front car and drawbar of the motor by means of hooks. The cars are pulled over the hill and the entry dips slightly in the opposite direction. The cars can be brought to a stop on the hill.

At the time of the accident a 7-car trip was being handled and it appears that the deceased had pulled the cars over the hill and they were still running but faster than the motor was. He had unhooked the chain from the motor and was gathering up the chain as the cars gained on the motor. The cars were probably traveling too fast and he gave the motor more current causing it to speed up faster than the cars. The chain caught on his clothes and pulled him off the motor. Before he could get out of the way and the trip stopped, one wheel of the front car passed over his leg. He was removed to the hospital but did not survive the shock.

This accident was due to unnecessary risk on the part of the motorman. As in most cases each motorman will have certain practices used in order to save time and work but which are not always the safest. This accident is an unusual one and it was recommended that the motor and cars be brought to a stop before the chain is disconnected.

Injured November 7, 1918; died November 10.—Gwinn & Gallagher, Busy Bee slope, Ronald: Eugene Prenett, nationality French, age 49 years, occupation fireman, married. Fatally injured on the night of November 7th, on the ash dump near boiler house at the above mine. An incline was used to dump the ashes. A steam hoist placed near the bottom of the incline was used to hoist the ash car. Prenett had hoisted a car of ashes and had pulled the front wheels over the end of the rails at top of dump. He called the pumpman to assist him in lifting the car on the track. The pumpman, when he reached the car, lifted the front end on the rails and the car ran back down the incline catching Prenett who was coming up the incline to assist in lifting it on. The car, as it struck Prenett, was derailed, catching him under it, causing injuries from which he died.

This was an unusual accident and was due to ordinary care not being taken by the men, for if some one had been left to attend the brake at the hoist as the car was lifted on the track the accident would not have happened. The deceased leaves a widow.

December 3.—Pacific Coast Coal Company, Mine No. 11, Black Diamond: Frank Venaro, nationality Italian, age 35 years, occupation inside laborer, married. Died about 3 a. m. December 3rd on gangway between Nos. 21 and 22 chute, 7th level north. Venaro was employed as a laborer loading coal from gangway stumps. He and his partner had loaded a car which they pushed out and had started back to get an empty; Venaro following his partner. When his partner turned around he found Venaro lying on the track and upon examination found him unconscious. He called the other men, working near, who started artificial respiration without success. While no one saw the deceased touch the trolley wire his partner stated that he must have come in contact with it.

The wire was guarded on both sides with the exception of about six feet, on the low side, at the point where Venaro was found and it would have been impossible for him to touch it except with his hand or head. His bucket was hanging on a post directly under the unguarded part of the wire and it is supposed that he was going to get a drink when the accident happened.

The doctor examined his body and stated that, in his opinion, he died from electric shock. The deceased leaves a widow.

RECAPITULATION OF FATAL CASUALTIES, 1918.

Residence	No.	Occupation	No.	Nationality	No.	Cause of Death	No.	NAME OF MINE	No.
Bayne.....	1	Blacksmith helper..	1*	American.....	6	Electrocuted, direct contact with trolley wire.....	1	Carbon Coal & Clay Co., Carbon....	1
Black Diamond..	1	Cagr.....	1	Austrian.....	9*	Falls of roof (coal, rock, etc.), at working face.....	1	Carbon Hill Coal Co., outside.....	1*
Burnett.....	13	Chute starter.....	2	English.....	2	Falls of roof (coal, rock, etc.), in room or chamber.....	7	Carbon Hill Coal Co., Dooty.....	1
Carbonado.....	3*	Fireboss.....	1*	Finn.....	5	Falls of roof (coal, rock, etc.), in room or chamber.....	3	Carbon Hill Coal Co., Wingate.....	1
Cumberland.....	2	Fireman.....	1	French.....	2*	Falls of face or pillar coal at work- ing face.....	3	Durham Colliery Co., No. 2.....	1*
Durham.....	1	Laborer.....	1	Irish.....	1	Falling down chute.....	3	Gwynn & Gallagher.....	1
Hiawatha.....	1	Machinist.....	1	Italian.....	4	Gas explosion, due to electric arc.....	1	Hyde Coal Co.....	2
Mendota.....	1*	Miner.....	25	Lithuanian.....	1	Gas explosion, due to electric arc.....	1	Mendota Coal & Coke Co.....	1
Ronald.....	5	Motorman.....	1	Pole.....	1	Run over by car or motor.....	12	Northwestern Imp. Co., No. 5.....	2
Rodlyn.....	2	.....	.....	Russian.....	1	Run over by car or motor.....	3*	Northwestern Imp. Co., No. 6.....	1
Spoketon.....	2	.....	.....	Welsh.....	2	Runaway car or trip.....	1	Northwestern Imp. Co., No. 8.....	2
Tono.....	1	.....	.....	.....	.....	Suffocation in chutes.....	1	Pacific Coast Coal Co., Hiawatha....	1
Wilkeson.....	.....	.....	.....	.....	.....	Suffocation in chutes.....	1*	Pacific Coast Coal Co., Burnett.....	13
.....	.....	.....	.....	.....	.....	Machinery.....	.....	South Willa Coal Co., No. 7.....	1
.....	.....	.....	.....	.....	.....	.....	.....	Washington Union Coal Co., No. 1....	2
.....	.....	.....	.....	.....	.....	.....	.....	Washington Union Coal Co., No. 2....	2
.....	.....	.....	.....	.....	.....	.....	.....	Wilkeson Coal & Coke Co., No. 3....	1
Total.....	34	.....	34	.....	34	.....	34	.....	34

* 1 killed on surface. † 2 killed on surface and 32 underground.

FATAL ACCIDENTS FOR FIVE YEARS BY LEADING CAUSES.

YEAR.	Killed Underground												Killed in Shaft					Killed on the Surface							Grand Total.	
	Falls of roof (coal, rock, etc.).	Falls of face or pillar coal.	Mine cars and loco-motives.	Gas explosions and burning gas.	Coal dust explosions (including gas and dust combined).	Explosives.	Suffocation from mine gases.	Electricity (shock or burns).	Animals.	Mining machines.	Mine fires (burned, suffocated, etc.).	Other causes.	Total.	Falling down shafts, chutes, or slopes.	Objects falling down shafts or slopes.	Cages or skips.	Other causes.	Total.	Mine cars and mine locomotives.	Electricity (shock or burns).	Machinery.	Boiler explosions or bursting steam pipes.	Railway cars and locomotives.	Other causes.		Total.
1914.....	6	2	3	1	31	3	1	1	1	1	1	1	16	1	1	1	1	1	1	1	2	1	1	1	1	
1915.....	5	2	1	2	31	4	1	2	2	1	1	1	42	1	1	1	1	1	1	1	1	1	1	1	45	
1916.....	5	2	2	2	1	1	1	2	2	1	1	1	18	1	1	1	1	1	1	2	1	1	1	1	21	
1917.....	3	3	3	1	12	1	1	1	1	1	1	1	31	1	1	1	1	1	1	1	1	1	1	1	30	
1918.....	10	3	3	1	1	1	1	1	1	1	1	1	31	1	1	1	1	1	1	1	1	1	1	1	34	
1914-1918.	29	13	12	4	43	7	1	8	1	1	1	1	134	2	2	1	2	2	4	1	3	1	1	1	11	147

FATAL ACCIDENTS FOR FIVE YEARS BY LEADING CAUSES.—Continued.

YEAR	Men Employed			Number of Days of Labor Performed	Average Days Active	Number Killed Per 1,000 Employed			Production Per Death (short tons)
	Under-ground	Surface	Total			Under-ground	Surface	Total	
1914.....	4,383	1,264	5,647	1,131,980	200	3.65	0.79	8.01	178,845
1915.....	3,683	1,146	4,829	786,736	165	11.40	2.62	9.32	183,540
1916.....	3,656	1,150	4,746	1,035,546	218	5.28	1.74	4.42	146,780
1917.....	4,063	1,267	5,345	1,448,233	271	6.66	2.33	6.01	133,425
1918.....	4,172	1,675	5,847	1,566,966	266	7.67	1.19	5.81	121,424
1914-1918.	4,005	1,326	5,331	5,971,460	227	6.83	1.69	5.56	112,928

PERCENTAGES OF FATAL ACCIDENTS FOR FIVE YEARS BY LEADING CAUSES.

YEAR.	Killed Underground												Killed in Shaft					Killed in Surface							Grand Total.		
	Falls of roof (coal, rock, etc.).	Falls of face or pillar coal.	Mine cars and loco- motives.	Gas explosions and burning gas.	Coal dust explosions (including gas and dust combined).	Explosives.	Suffocation from mine gases.	Electricity (shock or burns).	Animals.	Mining machines.	Mine fires (burned, suffocated, etc.).	Other causes.	Total.	Falling down shafts, chutes, or slopes.	Objects falling down shafts or slopes.	Cages or skips.	Other causes.	Total.	Mine cars and mine locomotives.	Electricity (shock or burns).	Machinery.	Boiler explosions or bursting steam pipes.	Railway cars and lo- comotives.	Other causes.		Total.	
1914.....	35.29	11.77	17.65	5.88	68.91	17.65	.....	5.88	.....	.....	.....	.....	94.12	.....	.....	.....	.....	.....	5.88	.....	.....	4.44	.....	.....	.....	5.88	100.00
1915.....	11.11	6.66	2.22	.....	.....	.....	.....	4.44	.....	.....	.....	.....	93.34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.22	6.66	100.00
1916.....	23.81	9.52	9.52	9.52	.....	19.05	.....	9.52	.....	.....	.....	.....	86.71	4.77	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9.52	100.00	
1917.....	10.00	10.00	10.00	.....	.....	.....	3.33	6.67	.....	.....	.....	.....	90.00	.....	.....	.....	.....	.....	6.67	3.33	.....	.....	.....	.....	.....	10.00	100.00
1918.....	29.42	8.82	8.82	2.94	35.30	.....	.....	2.94	.....	.....	.....	.....	91.18	2.94	.....	.....	.....	.....	2.94	2.94	2.94	.....	.....	.....	.....	5.88	100.00
1914-1918.	19.73	8.86	8.17	2.72	29.25	4.76	0.68	5.44	.....	.....	.....	11.56	91.16	1.36	.....	.....	.....	.....	2.72	0.68	2.04	.....	.....	.....	2.04	7.48	100.00

**NUMBER INJURED AT COAL MINES DURING THE CALENDAR YEAR ENDED
DECEMBER 31, 1918.**

CAUSES	Fatal	Perma- nent To- tal Disa- bility *	Perma- nent Par- tial Disa- bility †	Temporary Disa- bility		Total Non- Fatal Injuries
				Time Lost, More Than 14 Days	Time Lost, Not More Than 14 Days ‡	
Underground—						
1. Falls of roof (coal, rock, etc.).....	10		8	114	52	174
2. Falls of face or pillar coal.....	3	1	2	27	9	39
3. Mine cars and locomotives.....	3		9	77	20	106
4. Gas explosions and burning gas.....	1			18	4	22
5. Coal-dust explosions (including gas and dust combined).....	12			3		3
6. Explosives.....			1	6	1	8
7. Suffocation from mine gases.....						
8. Electricity.....	1			1	1	2
9. Animals.....			1	5	1	7
10. Mining machines.....				2	1	3
11. Mine fires (burned, suffocated, etc.).....						
12. Other causes.....	1		14	127	97	238
Total underground.....	31	1	35	380	186	602
In Shaft—						
13. Falling down shafts, slopes or chutes.....	1			1	2	3
14. Objects falling down shafts or slopes.....						
15. Cages or skips.....						
16. Other causes.....						
Total in shaft.....	1			1	2	3
On Surface—						
17. Mine cars and mine locomotives.....	1		4	8	4	16
18. Electricity.....						
19. Machinery.....	1		1	5	5	11
20. Boiler explosions or bursting steam pipes.....						
21. Railway cars and locomotives.....				1		1
22. Other causes.....			5	34	20	59
Total on surface.....	2		10	48	29	87
Grand total.....	34	1	45	429	217	692

* Permanent total disability—Loss of both legs or arms, one leg and one arm, total loss of eyesight, paralysis or other condition permanently incapacitating workman from doing any work of a gainful occupation.

† Permanent partial disability—Loss of one foot, leg, hand, eye, one or more fingers, one or more toes, any dislocation where ligaments are severed, or any other injury known in surgery to be permanent partial disability.

‡ In this column are included accidents which cause a loss of time more than 7 days.

RECAPITULATION OF NON-FATAL ACCIDENTS, MEMBER INJURED, NATURE OF INJURY, PERCENTAGE OF INJURIES, COMPENSATION FOR, AND TIME LOSS, 1918.

MEMBER INJURED	BRUISES				CUTS				PUNCTURES			
	Total	Returned to Work	Time Loss Injured Returned to Work	Compensation Paid Injured Returned to Work	Total	Returned to Work	Time Loss Injured Returned to Work	Compensation Paid Injured Returned to Work	Total	Returned to Work	Time Loss Injured Returned to Work	Compensation Paid Injured Returned to Work
Ankle.....	8	7	194	\$209 65	1	1	13	\$12 10				
Arm.....	9	9	145	141 00	4	3	225	1,962 45				
Back.....	21	18	400	617 25	1	1	14	10 10				
Body.....	12	8	332	385 05	1	1	15	9 25				
Chest.....	5	5	182	246 40								
Collar bone.....	1	1	21	28 25								
Ear.....					1							
Elbow.....	1	1	22	17 30								
Eye.....	19	18	310	344 10	25	22	617	4,905 55	1	1	169	\$735 00
Face.....	2	2	16	2 30	8	8	224	344 40	1	1	39	45 00
Foot.....	62	57	1,291	1,611 30	11	10	187	226 45	3	2	28	24 25
Finger.....	27	23	403	532 90	26	24	494	862 10				
Hand.....	17	17	268	267 90	21	19	574	346 35	3	2	30	23 10
Hands and face.....												
Head.....	2	2	41	46 15	14	13	207	383 60				
Hernia.....												
Hip.....	15	15	575	806 20								
Internal.....												
Knee.....	13	13	413	520 00	4	4	54	42 65				
Leg.....	39	30	638	707 80	4	3	99	150 90				
Neck.....	1	1	10	6 05	1	1	13	6 90				
Noe.....					1	1	17	10 40				
Pelvis bone.....	1	1	33	38 05								
Ribs.....	4	4	111	106 15								
Shoulder.....	8	6	184	231 65	1	1	17	30 20				
Side.....	3	3	69	91 45								
Thigh.....	1	1	21	20 20	1	1	14	8 10				
Thumb.....	7	6	153	213 25	14	13	247	389 70				
Toes.....	7	6	88	53 05	3	2	30	24 20				
Wrist.....	1				1	1	12	5 75	1			
Totals.....	280	254	5,060	\$7,243 60	143	120	2,874	\$9,713 05	9	6	206	\$327 35
Permanent partial disability.....	4	4	192	\$668 00	14	14	625	\$7,213 00	1	1	100	\$735 00
Inside accidents.....	254	223	5,313	\$6,437 65	124	110	2,601	\$8,720 10	8	5	246	\$908 90
Outside accidents.....	32	31	607	805 95	10	19	373	968 95	1	1	20	18 75

RECAPITULATION OF NON-FATAL ACCIDENTS, MEMBER INJURED, NATURE OF INJURY, PERCENTAGE OF INJURIES, COMPENSATION FOR, AND TIME LOSS, 1918.—Continued.

MEMBER INJURED	SPRAINS				FRACTURES				DISLOCATIONS			
	Total	Returned to Work	Time Loss Incurred to Work	Compensation Paid Injured Returned to Work	Total	Returned to Work	Time Loss Incurred to Work	Compensation Paid Injured Returned to Work	Total	Returned to Work	Time Loss Incurred to Work	Compensation Paid Injured Returned to Work
Ankle.....	10	7	309	\$470 50	6	4	225	\$421 45				
Arm.....	3	3	43	83 45	2	1	44	50 75				
Back.....	29	27	682	840 90	1							
Body.....												
Chest.....					1	1	88	112 50				
Collar bone.....												
Ear.....	2	2	37	60 55								
Elbow.....												
Eye.....												
Face.....												
Foot.....	3	3	52	74 40	8	5	306	388 75				
Finger.....					10	9	265	371 40	2	2	18	\$97 20
Hand.....												
Hands and face.....												
Head.....					1	1	77	155 50				
Hernia.....												
Hip.....	1	1	11	5 75	1	1	100	201 90				
Internal.....												
Knee.....	5	5	107	140 75	2	1	156	180 00	1	1	312	530 64
Leg.....	8	2	35	42 40	23	12	687	1,468 85				
Neck.....												
Nose.....					2	1	28	40 40				
Pelvis.....					3	1	96	110 75				
Ribs.....					16	15	522	1,270 60				
Shoulder.....	7	7	104	83 10	3	3	230	592 70	4	3	89	568 10
Side.....	4	3	144	192 70								
Thigh.....					1							
Thumb.....	1	1	26	30 00								
Toes.....					7	7	211	291 95	1	1	29	33 45
Wrist.....	2	2	34	21 90	2	2	84	107 00				
Totals.....	70	68	1,584	\$1,996 40	89	64	3,119	\$6,799 50	8	7	458	\$1,259 39
Permanent partial disability.....	1	1	156	\$315 00	9*	7	587	\$2,186 55	2	2	19	\$537 70
Inside accidents.....	64	57	1,366	\$1,634 10	77	55	2,326	\$5,320 30	7	6	440	\$1,237 19
Outside accidents.....	6	6	218	392 30	12	9	293	479 20	1	1	18	22 20

RECAPITULATION OF NON-FATAL ACCIDENTS, MEMBER INJURED, NATURE OF INJURY, PERCENTAGE OF INJURIES, COMPENSATION FOR, AND TIME LOSS, 1918.—Continued.

MEMBER INJURED	AMPUTATIONS				BURNS				INFECTIONS			
	Total	Returned to Work	Time Loss Injured Returned to Work	Compensation Paid Injured Returned to Work	Total	Returned to Work	Time Loss Injured Returned to Work	Compensation Paid Injured Returned to Work	Total	Returned to Work	Time Loss Injured Returned to Work	Compensation Paid Injured Returned to Work
Ankle.....												
Arm.....					1	1	26	\$52 50				
Back.....												
Body.....												
Chest.....												
Collar bone.....												
Ear.....												
Elbow.....												
Eye.....					1	1	15	13 85	3	3	39	\$21 05
Face.....					1	1	14	12 10				
Foot.....					1	1	15	16 15	2	2	33	35 65
Finger.....	10	10	357	\$1,706 85					10	8	139	402 15
Hand.....					2	2	33	25 95	10	10	150	131 55
Hands and face.....					26	19	515	708 55				
Head.....												
Hernia.....												
Hip.....												
Internal.....												
Knee.....												
Leg.....												
Neck.....												
Nose.....												
Pelvis bones.....												
Ribs.....												
Shoulder.....												
Slide.....												
Thigh.....												
Thumb.....	4	4	220	1,141 30					2	1	84	183 85
Toes.....												
Wrist.....									1	1	17	20 20
Totals.....	14	14	596	\$2,848 15	32	25	618	\$829 10	28	25	411	\$795 45
Permanent partial disability.....	13	13	585	\$2,842 40					2	2	60	\$476 35
Inside accidents.....	9	9	412	\$2,460 10	20	22	574	\$757 00	24	21	532	\$457 85
Outside accidents.....	5	5	184	388 05	3	3	44	42 10	4	4	79	388 10

RECAPITULATION OF NON-FATAL ACCIDENTS, MEMBER INJURED, NATURE OF INJURY, PERCENTAGE OF INJURIES, COMPENSATION FOR, AND TIME LOSS, 1918.—Continued.

MEMBER INJURED	INTERNAL				HERNIA			
	Total	Returned to Work	Time Loss Incurred Returned to Work	Compensation Paid Incurred Returned to Work	Total	Returned to Work	Time Loss Incurred Returned to Work	Compensation Paid Incurred Returned to Work
Ankle.....								
Arm.....								
Back.....								
Body.....								
Chest.....								
Collar bone.....								
Ear.....								
Elbow.....								
Eye.....								
Face.....								
Foot.....								
Finger.....								
Hand.....								
Hands and face.....								
Head.....								
Hernia.....					7	7	399	\$370 85
Hip.....								
Internal.....	6	5	253	\$392 60				
Knee.....								
Leg.....								
Neck.....								
Nose.....								
Pelvis bone.....								
Ribs.....								
Shoulder.....								
Side.....								
Thigh.....								
Thumb.....								
Toes.....								
Wrist.....								
Totals.....	6	5	253	\$392 60	7	7	399	\$370 85
Permanent partial disability.....								
Inside accidents.....	4	3	156	\$280 70	5	5	296	\$437 60
Outside accidents.....	2	2	97	111 90	2	2	103	133 25

RECAPITULATION OF NON-FATAL ACCIDENTS, MEMBER INJURED, NATURE OF INJURY, PERCENTAGE OF INJURIES, COMPENSATION FOR, AND TIME LOSS, 1918.—Concluded.

MEMBER INJURED	NUMBER INJURED				Time Loss Working Days Injured Returned to Work	Percent- age of Injuries	Compensa- tion Paid Returned to Work	PERMANENT PARTIAL DISABILITY		
	Inside	Outside	Total	Injured Return'd to Work				Total	Time Loss Injured Returned to Work	Compensa- tion Paid Returned to Work
Ankle.....	21	4	25	19	741	30.00	\$1,113 70	1	156	\$315 00
Arm.....	18	1	19	17	484	28.47	2,270 15	1	200	1,974 25
Back.....	51	1	52	46	1,156	25.13	1,468 25	1*		
Body.....	12	1	13	9	347	39.55	394 30			
Chest.....	4	1	5	5	182	36.40	246 40			
Collar bone.....	2		2	2	109	54.50	140 75			
Ear.....	1		1							
Elbow.....	2	1	3	3	59	19.67	77 35			
Eye.....	45	4	49	45	1,149	25.53	6,022 55	9	509	5,268 00
Face.....	9	3	12	12	293	24.42	403 80			
Foot.....	78	12	90	80	1,912	23.90	2,389 95	1	54	184 85
Finger.....	70	15	85	76	1,676	22.05	3,972 50	18	559	2,848 45
Hand.....	43	8	53	50	865	17.10	794 75			
Hands and face.....	26		26	19	515	27.10	708 55			
Head.....	15	2	17	16	325	20.31	535 25	1		107 20
Hernia.....	5	2	7	7	399	57.00	670 85			
Hip.....	15	2	17	17	696	40.35	1,013 85			
Internal.....	4	2	6	5	253	50.60	392 60			
Knee.....	21	4	25	24	1,042	43.41	1,414 94			
Leg.....	67	2	69	47	1,459	31.04	2,408 35	4*	342	959 45
Neck.....	3		3	2	23	11.50	12 95			
Nose.....	3		3	2	45	22.50	50 80			
Pelvis bone.....	4		4	2	129	64.50	148 80			
Ribs.....	17	3	20	19	633	33.31	1,376 75	2	112	738 65
Shoulder.....	19	4	23	20	634	31.70	1,595 75	2	122	942 70
Side.....	6	1	7	6	213	35.50	284 15			
Thigh.....	2	1	3	2	35	17.50	38 30			
Thumb.....	26	2	28	25	699	27.93	1,968 10	6	338	1,615 45
Toes.....	9	2	11	9	353	22.27	492 65			
Wrist.....	6	2	8	6	147	24.50	154 85			
Totals.....	606	87	692	599	16,558	27.64	\$32,375 44	40†	2,892	\$14,954 00
Permanent partial disability.....	38†	10	48	44	2,892	54.36	\$14,954 00	40†	2,892	\$14,954 00
Inside accidents.....	606		606	516	14,462	25.03	\$35,039 09	39†	1,909	\$18,157 60
Outside accidents.....		87	87	88	2,096	25.25	3,686 75	10	483	1,796 40

* 1 not returned to work. † 2 not returned to work.

RECAPITULATION OF NON-FATAL ACCIDENTS, 1918.

Residence	Num-ber In-jured	Nationality	Num-ber In-jured	Occupation	NUMBER INJURED		Name of Mine	NUMBER INJURED		Time Lost of Injured and Returned to Work
					Inside	Outside		Inside	Outside	
Bellingham...	1	American...	180	Blacksmith...	2	2	Bellingham Coal Co.	1	1	9
Bayne...	10	Austrian...	168	Bucker...	7	2	Bayne	8	3	83
Black Diamond	47	Belgian...	6	Cager...	2	9	Bayne	9	10	148
Buckley...	17	Bohemian...	1	Carpenter...	5	5	Burnett	23	8	36
Burnett...	39	Canadian...	6	Car repaler...	2	2	Burnett	23	23	566
Carbonado...	79	Croatian...	10	Chute starter...	3	3	Carbonado, outside	18	15	281
Centralla...	8	Dalmatian...	5	Coupler...	2	1	Carbonado, Wingate	15	15	252
Chehalla...	3	English...	24	Driver...	16	16	Carbonado, Denty	1	1	23
Cle Elum...	72	Fin...	62	Dumper...	9	9	Carbonado, No. 9	5	5	135
Cokedale...	9	French...	5	Electrician...	1	4	Carbonado, No. 6 (old 9)	13	6	279
Cumberland...	24	German...	18	Engineer...	2	6	Carbonado, Miller	6	6	109
Durham...	6	Greek...	1	Fireboos...	4	4	Carbonado, No. 10 (old 5)	8	1	302
Fairfax...	23	Hungarian...	1	Foreman...	3	5	Cokedale	2	5	43
Ladd...	8	Irish...	3	Foreman...	37	83	Fairfax	26	7	677
Ladd...	8	Italian...	110	Laborer...	12	2	Ford	2	1	61
Meimont...	1	Japanese...	2	Loader...	1	1	Ford's Prairie	2	4	107
Mendota...	3	Lithuanian...	2	Machine man...	1	1	Gale Creek	14	5	471
Morristown...	19	Montenegrin...	1	Miner...	425	1	Hyde	12	3	298
New Castle...	33	Negro...	3	Mine foreman...	8	1	Independent	22	22	453
Palmer...	3	Norwegian...	1	Motorman...	1	1	Issaquah	9	9	236
Pacoso...	5	Pole...	14	Oiler...	1	2	Ladd	6	2	108
Ravensdale...	43	Russian...	14	Pumpman...	4	4	Melmont	8	1	20
Renton...	32	Scotch...	5	Pusher...	13	1	Mendota	2	2	96
Roslyn...	127	Slav...	3	Rock picker...	13	1	National No. 6	41	3	117
Select...	2	Swede...	23	Rope rider...	6	6	Northwestern Imp. Co., No. 3	29	2	1,202
South Prairie...	18	Swiss...	1	Screener...	4	6	Northwestern Imp. Co., No. 5	32	29	682
Taylor...	17	Welsh...	17	Shot lighter...	12	12	Northwestern Imp. Co., No. 6	39	5	1,009
Tono...	38	Welsh...	17	Switcher...	16	16	Northwestern Imp. Co., No. 7	12	12	1,008
Wilkeson...	38	Welsh...	17	Timberman...	6	6	Northwestern Imp. Co., No. 8	1	1	187
				Timberman helper...	18	18	Northwestern Imp. Co., Hiasatha	2	2	19
				Timber packer...	3	3	Navy	41	5	36
				Tracklayer...	2	2	Packwood	2	2	89
				Trapper...	2	2	Pacific Coast Coal Co., No. 11	6	6	44
					2	2	Pacific Coast Coal Co., Cannon	1	1	1,422
					2	2	Pocahontas	3	3	306
					2	2		3	3	206

RECAPITULATION OF NON-FATAL ACCIDENTS, 1918.—Concluded.

Residence	Num-ber In-jured	Nationality	Num-ber In-jured	Occupation	NUMBER INJURED			Name of Mine	NUMBER INJURED		Time Loss of Injured and Returned to Work
					Inside	Outside	Inside and Outside		Inside	Outside	
.....				Trip rider.....	1	.....	1	Renton.....	45	2	877
.....				Woodsman.....	.....	6	6	Roslyn-Cle Elum.....	.....	5	124
.....								Roslyn Cascade Coal Co., No. 1.....	2	.....	5
.....								Roslyn Cascade Coal Co., No. 2.....	7	.....	76
.....								Roslyn Cascade Coal Co., No. 3.....	.....	.....	209
.....								Ravensdale.....	2	3	80
.....								Roslyn Coal & Coke Co., Plant.....	5	.....	73
.....								Roslyn Fuel Co., No. 1.....	10	.....	280
.....								Roslyn Fuel Co., No. 2.....	4	.....	39
.....								Roslyn Fuel Co., No. 3.....	10	.....	146
.....								Roslyn Fuel Co., No. 4.....	3	.....	62
.....								Roslyn Fuel Co., Summit.....	1	.....	60
.....								Sheldon.....	33	3	623
.....								South Willis Coal Co.....	2	.....	43
.....								Superior.....	17	1	669
.....								Taylor.....	18	.....	428
.....								Tono.....	23	1	385
.....								Wilkeson Mines.....	.....	.....	.....
Total.....	692	Total.....	692	Totals.....	605	87	692	Totals.....	605	87	16,553

* Not assignable to any one mine, Northwestern Improvement Company.

RECAPITULATION OF NON-FATAL INJURIES, BY CAUSES, 1918.

CAUSE OF INJURY	NUMBER INJURED		TIME LOST— DAYS* Men Returned to Work		Per- centage of In- juries	Compensa- tion Paid Injured Returned to Work	Perma- nent Partial Disa- bility
	Total	Re- turned to Work	Total	Average			
UNDERGROUND							
1. Falls of Roof (coal, rock, etc.)—							
(a) At working face.....	139	111	3,455	31.12	20.09	\$5,848 69	6
(b) In room or chamber.....	27	23	676	29.39	8.90	1,119 50	1
(c) On road, entry, or gangway....	7	5	143	28.60	1.01	287 80	1
(d) On slope	1	1	56	56.00	0.14	82 75	.....
2. Falls of Face or Pillar Coal—							
(a) At working face.....	37	33	859	26.00	5.35	1,249 10	2
(b) On road, entry, or gangway....	2	2	25	12.50	0.29	14 45	.....
3. Mine Cars and Locomotives—							
(a) Switching and spragging.....	21	18	653	36.28	3.04	1,475 65	2
(b) Coupling cars	14	12	338	28.17	2.02	567 45	2
(c) Falling from trips.....	2	1	56	56.00	0.30	552 10	1
(d) Run over by car or motor.....	19	14	586	41.86	2.74	982 70	2
(e) Caught between car and rib....	12	10	236	23.60	1.73	251 80	.....
(f) Caught between car and roof while riding	7	5	324	64.80	1.01	1,537 65	2
(g) Runaway car or trip.....	7	6	314	52.33	1.01	390 55	.....
(h) Miscellaneous	24	21	465	22.14	3.48	558 15	.....
4. Gas Explosions and Burning Gas—							
(a) Due to open light.....	16	13	356	27.38	2.32	500 85	.....
(b) Due to defective safety lamps..	.....	.....	.....	.....	.....	.....	.....
(c) Due to electric arc.....	.....	.....	.....	.....	.....	.....	.....
(d) Due to shot.....	1	.....	.....	.....	0.14	.....	.....
(e) Due to explosions of powder....	.....	.....	.....	.....	.....	.....	.....
(f) Miscellaneous—Lighting fuse ...	5	5	133	26.60	0.73	177 70	.....
5. Coal-Dust Explosions (including gas and dust combined)—							
(a) Due to open light.....	.....	.....	.....	.....	.....	.....	.....
(b) Due to defective safety lamps..	.....	.....	.....	.....	.....	.....	.....
(c) Due to electric arc.....	.....	.....	.....	.....	.....	.....	.....
(d) Due to shot.....	3	.....	.....	.....	0.43	.....	.....
(e) Due to explosions of powder....	.....	.....	.....	.....	.....	.....	.....
(f) Miscellaneous .....	.....	.....	.....	.....	.....	.....	.....
6. Explosives—							
(a) Transportation .....	.....	.....	.....	.....	.....	.....	.....
(b) Charging	1	1	79	79.00	0.14	159 50	.....
(c) Suffocation .....	.....	.....	.....	.....	.....	.....	.....
(d) Drilling into old holes.....	1	1	26	26.00	0.14	52 50	.....
(e) Striking in loose rock or coal...	.....	.....	.....	.....	.....	.....	.....
(f) Thawing .....	.....	.....	.....	.....	.....	.....	.....
(g) Caps, detonators, etc.....	1	1	8	8.00	0.14	2 00	.....
(h) Unguarded shots .....	.....	.....	.....	.....	.....	.....	.....
(i) Returned too soon.....	1	1	37	37.00	0.14	42 70	.....
(j) Premature shot	1	1	39	39.00	0.14	45 00	.....
(k) Sparks from match, lamp, or candle	2	2	78	39.00	0.30	120 00	1
(l) Delayed blast .....	.....	.....	.....	.....	.....	.....	.....
(m) Shot breaking through rib or pillar .....	.....	.....	.....	.....	.....	.....	.....
(n) Miscellaneous	1	1	33	33.00	0.14	38 10	.....
7. Suffocation from Mine Gases.....	.....	.....	.....	.....	.....	.....	.....
8. Electricity—							
(a) Direct contact with trolley wire.	1	1	19	19.00	0.14	13 85	.....
(b) Bar or tool striking trolley wire	.....	.....	.....	.....	.....	.....	.....
(c) Contact with mining machine....	.....	.....	.....	.....	.....	.....	.....
(d) Contact with machine feed wire..	.....	.....	.....	.....	.....	.....	.....
(e) Contact with haulage motor....	.....	.....	.....	.....	.....	.....	.....
(f) Miscellaneous	1	1	14	14.00	0.14	12 10	.....

* Working days.

RECAPITULATION OF NON-FATAL INJURIES, BY CAUSES, 1918.—Concluded.

CAUSE OF INJURY	NUMBER INJURED		TIME LOST—DAYS* Men Returned to Work		Per-centage of In-juries	Compensa-tion Paid Injured Returned to Work	Perma-nent Partial Disa-bility
	Total	Re-turned to Work	Total	Average			
UNDERGROUND—Concluded							
9. Animals	7	6	178	29.66	1.01	\$339 25	1
10. Mining Machines (other than Sc).....	3	3	47	15.67	0.43	37 80	.....
11. Mine Fires (burned, suffocated, etc.)							
12. Other Causes—							
(a) Fall of person.....	33	32	908	28.21	4.78	1,188 80	.....
(b) Machinery (other than 10).....	4	4	268	65.75	0.58	2,048 65	1
(c) Rush of coal or gob or bumps.....	8	8	95	31.67	0.43	105 60	.....
(d) Falling timber	27	24	561	24.20	3.90	675 50	.....
(e) Suffocation in chutes							
(f) Hand tools, axes, bars, etc.....	53	49	785	16.02	7.66	965 90	2
(g) Nails, splinters, flying coal.....	50	44	874	19.86	7.23	4,597 55	7
(h) Rock, coal, timber, coming down chute	23	20	497	24.85	3.32	640 15	.....
(i) Miscellaneous	45	39	1,204	30.87	6.51	2,480 45	4
Totals.....	602	514	14,434	28.06	87.00	\$28,662 29	35
IN SHAFT							
13. Falling Down Shafts, Slopes or Chutes	3	2	28	14.00	0.43	\$27 40	.....
14. Objects Falling Down Shafts or Slopes							
15. Cages or Skips.....							
16. Other Causes—							
(a) Overwinding							
(b) Breaking of cables.....							
(c) Miscellaneous							
Total number shaft accidents..	3	2	28	14.00	0.43	\$27 40	.....
ON SURFACE							
17. Mine Cars and Mine Locomotives...	16	16	489	30.56	2.32	\$904 25	4
18. Electricity							
19. Machinery	11	11	230	20.91	1.59	297 35	1
20. Boiler Explosions or Bursting Steam Pipes							
21. Railway Cars and Locomotives.....	1	1	15	15.00	0.14	9 25	.....
22. Other Causes—							
(a) Explosives	1	1	15	15.00	0.14	16 15	.....
(b) Fall of person.....	6	6	265	44.16	0.87	413 10	1
(c) Falling objects (derricks, booms, etc.)	5	4	107	26.75	0.72	148 50	.....
(d) Suffocation in chute, bin, or culm							
(e) Falls or slides of rock or coal..	6	6	162	27.00	0.87	223 05	1
(f) Steam shovels							
(g) Hand tools	12	12	209	17.42	1.73	213 45	.....
(h) Miscellaneous	29	26	604	23.23	4.19	1,460 65	3
Total number on surface or in strip pits.....	87	83	2,066	25.25	12.67	\$3,685 75	10
Grand Totals	692	599	16,558	27.64	100.00	\$32,375 44	45

* Working days.

OPERATING COMPANIES WITH NAMES OF MANAGERS, SUPERINTENDENTS, MINING ENGINEERS AND MINE FOREMEN FOR THE YEAR 1918.

NAME OF COMPANY	Name of Mine	Postoffice Address of Mine	Manager	Superintendent	Mining Engineer	Mine Foreman
KING COUNTY—						
Black River Coal Company	Black River	Earlinton	Andrew Kennedy	H. J. DeWinter	H. L. Handley	H. J. DeWinter
Carlton Coal & Clay Company	Carlton & Daly	Bayne	D. S. Hanley	H. J. Handley		J. F. Valley
Central Coal Company	Grand Ridge	Issaquah	F. C. Ferre	L. J. Harris		Wm. Lewis
Cumberland Coal Mining Company	Eureka	Cumhamland	Abc Morris	Frank Merritt	F. J. Donner	J. S. Skym
Denny-Renton Clay & Coal Company	No. 1 and Shaft	Taylor	Jno. F. Kenan	J. E. Bergh	A. E. Anderson	Phil DeWinter
Denny-Renton Clay & Coal Company	Denny-Renton	Renton	Jno. F. Kenan	J. E. Kendtner		Geo. Marshall
Durham Colliery Company	Nos. 1 and 2	Durham	Chas. A. Foster	Samus Hyde	John Williams	Evan T. Jones
Hyde Coal Company	Hyde	Cumhamland	Philip Rowe			
John McQuade	McQuade	Renton	John McQuade	G. A. Stonebridge		
National Coal Company	No. 6	Cumhamland	A. C. Deans	Wm. R. Reese	W. J. Williams	D. J. Thomas
Northwestern Improvement Company	Hiawatha	Hiawatha	O. C. Andersen	J. D. Davis	R. W. Smith	M. A. Morgan
Ozark Coal Mining Company	Navy	Cumhamland	G. W. Sheataley	R. Christiansen		(Ben Allen
Pacific Coast Coal Company	No. 11	Black Diamond	S. H. Green			
Pacific Coast Coal Company	Ford	New Castle	S. H. Green	H. N. Freeman	R. W. Smith	John Parker
Pacific Coast Coal Company	Cannon	Pacoseco	S. H. Green		R. W. Smith	Fred Ring
Pacific Coast Coal Company	Issaquah	Issaquah	S. H. Green	J. J. Jones	R. W. Smith	Fred Landstrom
Pocahontas Coal & Coke Company	Pocahontas	Palmer	J. R. Miller	Joseph Foster		
Renton Coal Company	Renton	Renton	A. L. Kempster	B. W. Dunn	Mr. Strain	John Morgan
Raven Coal Company	Ravensdale	Ravensdale	F. C. Ferre	M. O. Butler		
KITTITAS COUNTY—						
Independent Coal & Coke Company	Queen	Cle Elum	D. F. Buckingham	Wm. F. Shaw (Gen)	W. H. Simons	James Nelson
Northwestern Improvement Company	No. 8	Roslyn	C. C. Andersen (Gen)	Peter Bagley (Gen)	D. R. Swem (Chief)	Geo. Morris
Northwestern Improvement Company	No. 8	Roslyn	C. C. Andersen (Gen)	Peter Bagley (Gen)	D. R. Swem (Chief)	Geo. Forsythe
Northwestern Improvement Company	No. 3	Ronald	C. C. Andersen (Gen)	Peter Bagley (Gen)	D. R. Swem (Chief)	J. T. Tongue
Northwestern Improvement Company	No. 3 (new mine)	Ronald	C. C. Andersen (Gen)	Peter Bagley (Gen)	D. R. Swem (Chief)	Thos. Ramsay
Northwestern Improvement Company	No. 6	Roslyn	C. C. Andersen (Gen)	Peter Bagley (Gen)	D. R. Swem (Chief)	E. G. Richards
Northwestern Improvement Company	No. 7	Cle Elum	C. C. Andersen (Gen)	Peter Bagley (Gen)	D. R. Swem (Chief)	J. H. Pascoe
Northwestern Improvement Company	No. 7 Extension	Cle Elum	C. C. Andersen (Gen)	A. Hodder, Asst.	D. R. Swem (Chief)	J. H. Pascoe
Northwestern Improvement Company	Cle Elum	Cle Elum	C. C. Andersen (Gen)	A. Hodder, Asst.	D. R. Swem (Chief)	E. J. McGilley
Roslyn Cascade Coal Company	No. 1	Ronald	Wm. Mackay	Wm. Mackay	Jas. E. Ash	Robert Scoble
Roslyn Cascade Coal Company	No. 2	Ronald	Wm. Mackay		Jas. E. Ash	Jas. Ash
Roslyn Coal & Coke Company	Plant	Roslyn	A. F. Plant		Wm. Simmons	William Moses
Roslyn Fuel Company	No. 1	Roslyn	D. F. Buckingham	Wm. F. Shaw (Gen)	Wm. H. Simons	Thos. Miller
Roslyn Fuel Company	No. 2	Roslyn	D. F. Buckingham	Wm. F. Shaw (Gen)	W. H. Simons	Dave Bowie
Roslyn Fuel Company	No. 3	Roslyn	D. F. Buckingham	Wm. F. Shaw (Gen)	W. H. Simons	Wm. Evans
Roslyn Fuel Company	Summit	Cle Elum	D. F. Buckingham	Wm. F. Shaw (Gen)	W. H. Simons	Wm. Galloway

OPERATING COMPANIES WITH NAMES OF MANAGERS, SUPERINTENDENTS, MINING ENGINEERS AND MINE FOREMEN FOR THE YEAR 1918.—Concluded.

NAME OF COMPANY	Name of Mine	Postoffice Address of Mine	Manager	Superintendent	Mining Engineer	Mine Foreman
LEWIS COUNTY—						
Centrella Coal Mining Company.....	Empress.....	Centrella.....	Geo. Arnold.....	Geo. Arnold.....	E. Martin.....	Pat Hughes.....
Ford's Prairie Coal Company.....	Ford's Prairie.....	Centrella.....	A. D. Foron.....			Mike Jacobson.....
Lincoln Coal Mining Company.....	Lincoln.....	Galvin.....	A. C. Hansen.....	Homer Johnston,	T. E. Martin.....	Thos. Finlay.....
Mendota Coal & Coke Company.....	No. 1.....	Mendota.....	B. H. Johnston.....	Assistant.....		J. G. Perkins.....
Monarch Coal Mining Company.....	Monarch.....	Koplah.....	Jay Arnew.....			P. Pergolas.....
Olympia Coal Mining Company.....	Packwood.....	Packwood.....	D. P. Damascus.....			Wm. Devan.....
Phoenix Coal Company.....	Ladd.....	Ladd.....	E. J. Felt.....	D. W. Watkins.....	R. P. Tarr.....	John Johns.....
Superior Coal Company.....	No. 2.....	Chenails.....		Frank Ewing (Gen.)		Thos. R. Jones.....
PIERCE COUNTY—						
Carbon Hill Coal Company.....	North No. 11.....	Carbonado.....	S. F. B. Morse (Gen.)	Frank Good.....	John Harvey.....	Owen Roberts.....
Carbon Hill Coal Company.....	No. 6 (old 9).....	Carbonado.....				W. H. Evans.....
Carbon Hill Coal Company.....	Douty Mine.....	Carbonado.....				A. Pugnetti.....
Carbon Hill Coal Company.....	Miller.....	Carbonado.....				Richard Williams.....
Carbon Hill Coal Company.....	Wingate.....	Carbonado.....				Richard Williams.....
Carbon Hill Coal Company.....	New No. 9.....	Carbonado.....				Owen Roberts.....
Carbon Hill Coal Company.....	No. 10.....	Carbonado.....				Ed. Husband.....
Carbon Hill Coal Company.....	Fairfax.....	Fairfax.....	W. R. Rust.....	J. R. Patzer.....	John Harvey.....	Mark Bowers.....
Gale Creek Coal Mines.....	Gale Creek.....	Wilkeson.....		J. T. Lee.....		Robt. Cox.....
Pacific Coast Coal Company.....	Burnett.....	Burnett.....	S. H. Green.....	George Clark.....	R. W. Smith.....	Joe McDonald.....
South Willis Coal Company.....	No. 7, 8 and 10.....	Morristown.....	Abn Morris.....		F. J. Dobrer.....	Jonas Morris.....
Wilkeson Coal & Coke Company.....	Wilkeson.....	Wilkeson.....		J. T. Lee.....	C. L. White.....	J. J. Corey.....
SEAGIT COUNTY—						
Cokedale Coal Company.....	Cokedale.....	Cokedale.....	F. A. Hill.....		P. A. Hill, Jr.....	
THURSTON COUNTY—						
Washington Union Coal Company.....	Tono No. 1.....	Tono.....			R. B. Ober.....	Chas. Friend.....
WHATCOM COUNTY—						
Bellingham Coal Mining Company.....	Bellingham.....	Bellingham.....	Jas. A. Kelley.....	Fred Jarrett.....	Jas. A. Kelly.....	Thos. Voyce.....
Whatcom County Coal Company.....	Blue Canyon.....	Blue Canyon.....		Andrew Eklund.....		T. Leman.....

TABLE SHOWING NAMES OF COMPANIES, POSTOFFICE ADDRESS, SHIPPING FACILITIES AND PRINCIPAL MARKET.

List of Operating Companies	Postoffice Address	Shipping Facilities	Principal Market
Black River Coal Company.....	Colman Bldg., Seattle, Wash.	Pacific Coast Railway.....	Local
Bellingham Coal Mining Company.....	Box 390, Bellingham, Wash.	Bellingham & Northern.....	Local
Cumberland Coal Mining Company.....	Cumberland, Washington	Northern Pacific Railway.....	Washington
Central Coal Company.....	707 Securities Bldg., Seattle, Wash.	Northern Pacific Railway.....	Seattle and Tacoma
Carbun Coal & Clay Company.....	Bayne, Washington	N. P. Ry. and C. M. & St. P. Ry.....	Washington and Oregon
Carbon Hill Coal Company.....	Carbonado, Washington	Northern Pacific Railway.....	Washington and Oregon
Centralia Coal Mining Company.....	Centralia, Washington	Eastern Railroad & Lumber Company.....	Washington
Cokedale Coal Company.....	Sedro Woolley, Washington	Great Northern Railway.....	Washington
Denny & Denny, Inc.....	Ellensburg, Washington	Wagon.....	Local
Denny-Renton Clay & Coal Company.....	Hoge Bldg., Seattle, Wash.	Pacific Coast Railway.....	Factory use
Durham Colliery Company.....	Tacoma Bldg., Tacoma, Wash.	N. P. Ry. and C. M. & St. P. Ry.....	Washington
Ford's Prairie Coal Company.....	Centralia, Washington	N. P. Ry. and P. S. & W. H. R. R.....	Washington
Gale Creek Coal Mines Company.....	Tacoma, Washington	Northern Pacific Railway.....	Washington
Gwinn & Gallagher.....	Roslyn, Washington	Northern Pacific Railway.....	Washington
Hyde Coal Company.....	Seattle, Washington	Northern Pacific Railway.....	Washington and Oregon
Independent Coal & Coke Company.....	White Bldg., Seattle, Washington	Northern Pacific Railway.....	Washington, Oregon and Idaho
John McQuade.....	Renton, Washington	Wagon.....	Local
Monarch Coal Mining Company.....	Centralia, Washington	Eastern Railroad & Lumber Company.....	Washington and Oregon
Mendota Coal & Coke Company.....	Centralia, Washington	Northern Pacific Railway.....	Washington and Oregon
National Coal Company.....	Henry Bldg., Seattle, Wash.	N. P. Ry. and C. M. & St. P. Ry.....	Washington
Northwestern Improvement Company.....	N. P. Bldg., Tacoma, Wash.	Northern Pacific Railway.....	Northern Pacific Railway
Olympia Coal and Mining Company.....	Centralia, Washington	Northern Pacific Railway.....	Washington
Ozark Coal Mining Company.....	Cumberland, Washington	N. P. Ry. and C. M. & St. P. Ry.....	Washington
Pacific Coast Coal Company.....	Smith Bldg., Seattle, Wash.	N. P. Ry. and P. O. Ry.....	Washington, Oregon and California
Phoenix Coal Company.....	Tacoma, Washington	Tacoma Eastern R. R.....	Washington
Porahontas Coal & Coke Company.....	Palmer, Washington	Northern Pacific Railway.....	Washington
Raven Coal Company.....	707 Securities Bldg., Seattle.....	Northern Pacific Railway.....	Seattle and Tacoma
Renton Coal Company.....	500 Electric Bldg., Seattle, Wash.	P. S. E. R. and N. P. Ry.....	Puget Sound Cities
Roslyn Cascade Coal Company.....	Roslyn, Washington	Northern Pacific Railway.....	Eastern Washington
Roslyn Coal & Coke Company.....	Roslyn, Washington	Northern Pacific Railway.....	Eastern Washington
Roslyn Fuel Company.....	White Bldg., Seattle, Wash.	Northern Pacific Railway.....	Washington, Oregon and Idaho
Salzer Valley Coal Company.....	Centralia, Washington .6	By teams.....	Idaho
Sheldon Coal Company.....	Chehalis, Washington	Twin City Light & Power Company.....	Local
Superior Coal Company.....	Chehalis, Washington	Northern Pacific Railway.....	Portland, Oregon
South Willis Coal Company.....	Spokane, Washington	Northern Pacific Railway.....	Washington
The Fairfax Mine, Incorporated.....	Tacoma, Washington	Northern Pacific Railway.....	Tacoma Smelter
Washington Union Coal Company.....	Tono, Washington	Oregon-Washington R. R. & N.....	Washington and Oregon
Whatcom County Coal Company.....	R. F. D. No. 3, Bellingham, Wash.	Northern Pacific Railway.....	Washington
Wilkeson Coal & Coke Company.....	Tacoma, Washington	Northern Pacific Railway.....	Washington

NAME, ADDRESS AND NUMBER OF CERTIFICATE OF THOSE WHO PASSED EXAMINATIONS.

FIRST CLASS			SECOND CLASS		
Name	Address	No. of Certificate	Name	Address	No. of Certificate
Paul Gallagher	Black Diamond.	1	J. S. Murphy	Black Diamond.	1
M. A. Morgan	Black Diamond.	2	George Elner	Issaquah	2
John F. Danielson	New Castle.	3	Richard Mitchell	Black Diamond.	3
John Parker	Issaquah.	4	Thomas Choyce	Cle Elum.	4
Joseph Foster	Bayne.	5	Wm. Clarke	Cle Elum.	5
H. L. Handley	Bayne.	6	Geo. Cormie	Cle Elum.	6
Joseph McDonald	Black Diamond.	7	E. J. McGilley	Cle Elum.	7
James Ash	Roslyn.	8	James Fisher	Cle Elum.	8
W. J. Evans	Roslyn.	9	Joseph W. Parker	Cle Elum.	9
C. F. Smith	Cle Elum.	10	John Heathcock	Roslyn.	10
Wm. Spears	Roslyn.	11	Wm. H. Evans	Burnett.	11
Rudolph Werberger	Roslyn.	12	J. B. Brady	Burnett.	12
Henry Taylor	Roslyn.	13	Robert Thomas	Issaquah	13
Fred Blanco	Roslyn.	14	Stanley Smith	Fairfax.	14
J. H. Pascos	Cle Elum.	15	Theo E. Rouse	New Castle.	15
Ralph Mayer	Roslyn.	16	D. J. Thomas	Wilkeson.	16
John Morgan	Roslyn.	17	Mike Simsek	Black Diamond.	17
J. T. Tonge	Roslyn.	18	Richard Marsden	Wilkeson.	18
I. Greenhalgh	Roslyn.	19	Arvid Swanson	Black Diamond.	19
A. R. Norris	Roslyn.	20	Fred Pontin	Black Diamond.	20
James E. Ash	Roslyn.	21	John Howells	Black Diamond.	21
Thomas McKean	Roslyn.	22	Thomas John Rees	Renton.	22
Matt Boose	Roslyn.	23	Harry J. DeWinter	Taylor.	23
Thomas Hale	Roslyn.	24	Lou McDonald	Black Diamond.	24
John C. Graham	Roslyn.	25	Matt Mohar	Roslyn.	25
Thos. Ramsay	Roslyn.	26	Dan Shields	Cle Elum.	26
E. G. Richards	Roslyn.	27	James M. Boose	Roslyn.	27
George Morris	Roslyn.	28	Matt Hind	Cle Elum.	28
Thomas Finley	Tono.	29	Cuthbert Chas. Nunn	Cle Elum.	29
Mark Bowers	Carbonado.	30	Horace Davis	Burnett.	30
Wm. H. Evans	Burnett.	31	J. Thomas Woalley	Roslyn.	31
Edwin Husband	Carbonado.	32	Harry Irwin	Franklin.	32
James D. Davies	Cumberland.	33	T. W. Downing	Carbonado.	33
Richard Williams	Carbonado.	34	Ernest J. Lindman	Carbonado.	34
Wm. Lewis	Wilkeson.	35	John McDonald	Carbonado.	35
Owen Roberts	Carbonado.	36	Antonio Ferrero	Burnett.	36
Chas. B. White	Carbonado.	37	Isaac Jones	Cumberland.	37
Daniel Davies	Carbonado.	38	Richard Goodhead	Black Diamond.	38
J. Edw. Bergin	Burnett.	39	Chas. Sampila	Cumberland.	39
G. E. Rockefeller	Fairfax.	40	Thomas Baldwin	Mendota.	40
Manchester Walters	Renton.	41	Edward Griffiths	Cumberland.	41
John J. Corey	Wilkeson.	42	Walter Clide Faulkner	Carbonado.	42
George Savage	Fairfax.	43	David Thompson	Issaquah.	43
Henry J. DeWinter	Taylor.	44	J. M. Rivas	Carbonado.	44
D. P. Davies	Buckley.	45	John R. Cowen	Carbonado.	45
Robt. Thompson	Roslyn.	46	Wm. Bolton	Carbonado.	46
W. L. Wallace	Roslyn.	47	Frank Chromoga	Fairfax.	47
Wm. Clarke	Cle Elum.	48	D. C. Rees	Burnett.	48
E. J. McGilley	Cle Elum.	49	Chas. E. Wilkinson	Cle Elum.	49
Harry A. Wylam	Tono.	50	Wm. P. Saul	Cle Elum.	50
Tom Voyce	Carbonado.	51	James Johnston	Cle Elum.	51
Richard Smith	Carbonado.	52	John Quinn	Roslyn.	52
Griffith Llewellyn	Enumclaw.	53			
Thomas Summerill	Issaquah.	54			
John Hutchinson	Mendota.	55			
Walter Warnock	Mendota.	56			
Walter M. Bennett	Carbonado.	57			
D. O. Rees	Burnett.	58			
J. R. Glackin	Burnett.	59			
James W. Fisher	Cle Elum.	60			
James Nelson	Cle Elum.	61			
Joseph Parker	Cle Elum.	62			

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Reports of State Inspectors of Coal Mines of Washington, 1887-1917.

Reports prior to September 30, 1906, are not available, but later reports can be obtained from the State Mine Inspector, Alaska Bldg., Seattle, Wash., or the State Librarian, Olympia, Wash.

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Mineral Resources of the United States, 1883-1917.

Smith, E. Eggleston.—Coals of the State of Washington. Bulletin 474, 1911.

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Mount Stuart Folio; Seattle Folio; Tacoma Folio; Snoqualmie Folio; and other folios pertinent to Washington.

Smith, George Otis.—Coal Fields of the Pacific Coast, Twenty-second Annual Report, Part III, pp. 473, 513, 1902.

Address, Director, United States Geological Survey, Washington, D. C.

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, Volume 2.—Annual Report for 1902. Part 1, The Building and Ornamental Stones of Washington, by S. Shedd; part 2, The Coal Deposits of Washington, by Henry Landes and C. A. Ruddy. Postage 20 cents.

Bulletin 3.—The Coal Fields of King County, by George W. Evans. Bound in cloth, price 75 cents.

Bulletin 9.—The Coal Fields of Kittitas County, by E. J. Saunders. Bound in cloth, price 60 cents; paper cover, price 40 cents.

Bulletin 10.—The Coal Fields of Pierce County, by Joseph Daniels. Bound in cloth, price 60 cents; paper cover, price 40 cents.

Bulletin 12.—Bibliography of Washington Geology and Geography, by Gretchen O'Donnell. Paper cover; price 25 cents.

Bulletin 13.—The Tertiary Formations of Western Washington, by Charles E. Weaver.

Bulletin 18.—The Coal Fields of Lewis, Thurston and Cowlitz Counties, by Harold E. Culver. In preparation.

Bulletins.—The Mineral Resources of Washington, with statistics, by Henry Landes.

Address, State Librarian, Olympia, Wash.

OTHERS.

Tenth Census of the United States, Volume XV.

STATE OF WASHINGTON
DEPARTMENT OF STATE

THIRD BIENNIAL REPORT

ELECTION DIVISION



I. M. HOWELL
Secretary of State

OLYMPIA, WASH.
FRANK M. LAMBORN  PUBLIC PRINTER
1919

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LETTER OF TRANSMITTAL.

STATE OF WASHINGTON.
OFFICE OF THE SECRETARY OF STATE.
ELECTION DIVISION.

OLYMPIA, WASH., December 31, 1918.

Honorable Ernest Lister, Governor.

SIR: I have the honor to submit herewith to you, and through you to the Honorable State Legislature, a report of the Election Division of this department for the biennial period ending December 31, 1918.

Respectfully submitted,

I. M. HOWELL,

Secretary of State.

INTRODUCTION.

The numerous urgent requests for detailed information relative to the primary and general elections make necessary the publication of this report.

Complying with Section 4828 Rem. and Bal. Code, the State Canvassing Board, consisting of the State Auditor, State Treasurer and Secretary of State, met on October 2, 1918, and canvassed the returns of the primary election held on September 10, 1918, with the result as shown elsewhere in this report.

On November 29, 1918, the thirty-ninth county filed in the office of the Secretary of State its abstract of the returns for the general election held November 5, 1918. This department proceeded at once to check, compare and estimate the vote shown on the returns filed by the various County Auditors, and on December 3, 1918, certified to the Governor the result of such canvass as otherwise shown herein and as required by Sections 4971-30 and 8998 Rem. and Bal. Code.

The 1917 Legislature appropriated \$75,000.00 to defray the expenses of the measures presented under any of the provisions of the initiative, referendum and recall. Of this amount there has been turned back into the State Treasury approximately \$54,195.55.

INITIATIVE.

During the current biennium five initiative measures were filed. These were numbered 30, 31, 32, 33 and 34. No petitions were filed on any of these measures.

REFERENDUM.

The referendum was invoked on two laws enacted by the 1917 Legislature, to-wit: Chapters 19 and 167. These measures were numbered serially and respectively 10 and 11. On June 6, 1918, petitions were filed on Referendum No. 10, which were immediately detached and bound into volumes as required by law. The petitions were then checked and found to have 23,007 apparently legal signatures, 12,047 uninitialed and 1,182 duplicates. The number required to entitle the measure to a place on the ballot was 22,657. Consequently Referendum No. 10 was found to be properly entitled to a place upon the ballot. Prosecuting Attorneys were promptly furnished with lists of uninitialed and duplicated signers resident in their respective counties in accordance with the provisions of Section 16, Chapter 138 of the Laws of 1913.

No petition was filed on Referendum No. 11.

The 1917 Legislature passed House Joint Resolution No. 1, proposing to the people a Constitutional Convention. Both Referendum Measure No. 10 and the resolution proposing a Constitutional Convention were submitted to the people at the general election held November 5, 1918, with the result as elsewhere shown in this report.

LIST

OF

Congressional, State and County

Officers

OF THE

STATE OF WASHINGTON

1919

CONGRESSIONAL, STATE AND COUNTY OFFICERS

CONGRESSIONAL

U. S. Senators.....	Wesley L. Jones	Seattle
	Miles Poindexter	Spokane
U. S. Representatives.....	John F. Miller, 1st Dist.....	Seattle
	Lindley H. Hadley, 2d Dist.....	Bellingham
	Albert Johnson, 3d Dist.....	Hoquiam
	John W. Summers, 4th Dist.	Walla Walla
	J. Stanley Webster, 5th Dist....	Spokane

STATE OFFICERS.

Governor	Ernest Lister	Olympia
Secretary to the Governor.....	Irvin W. Zieglaus.....	Olympia
Lieutenant Governor	Louis F. Hart	Tacoma
Secretary of State	I. M. Howell	Olympia
Assistant Secretary of State.....	J. Grant Hinkle.....	Olympia
Deputy Sec. of State, in charge of		
Motor Vehicle Division	Chas. A. Foster.....	Olympia
Auditor	C. W. Clausen	Olympia
Assistant State Auditor.....	F. P. Jameson.....	Olympia
Deputy State Auditor	E. F. Jones.....	Olympia
Treasurer	W. W. Sherman	Olympia
Deputy State Treasurer	Geo. A. Hall	Olympia
Attorney General	L. L. Thompson.....	Olympia
Assistant Attorney General.....	Hance H. Cleland	Olympia
Assistant Attorney General.....	Glenn J. Fairbrook	Olympia
Assistant Attorney General.....	D. E. Twitchell	Olympia
Assistant Attorney General.....	John A. Homer	Olympia
Assistant Attorney General.....	R. M. Burgunder	Olympia
Commissioner of Public Lands.....	Clark V. Savidge	Olympia
Insurance Commissioner	H. O. Fishback	Olympia
Deputy Insurance Commissioner, ...		
Actuary Insurance Department.....	F. T. Houghton	Olympia
Superintendent Public Instruction.....	Mrs. Josephine Corliss Preston	Olympia
Asst. Supt. Public Instruction.....	Arthur Wilson	Olympia
Deputy Supt. Public Instruction.....	Mrs. Addie E. Dickinson.....	Olympia
Adjutant General	Harvey J. Moss.....	Seattle
Asst. Adjutant General.....	Ernest H. Keene.....	Seattle
Agricultural Commissioner	E. F. Benson.....	Olympia
Sec'y. Agricul. Dept.	F. H. Gloyd.....	Olympia
Asst. Commr., Division of Dairy and		
Live Stock	R. J. Donohue.....	Olympia
Asst. Commr., Division of Foods,		
Feeds, Fertilizers, Drugs, and Oils		
(including inspection of Bakeries)....	Will H. Adams.....	Seattle
Chief Deputy Oil Inspector.....	S. P. Wilson.....	Seattle
Asst. Commr., Division of Horticulture....	M. L. Dean.....	Olympia
State Fair Secretary.....	Frank Meredith	Yakima
Director of Farm Markets	Asher P. Hobson.....	Pullman
State Labor Commissioner	C. H. Younger.....	Olympia
State Librarian	J. M. Hitt.....	Olympia
Asst. State Librarian	Marie Shrock	Olympia
Law Librarian	C. Will Shaffer.....	Olympia
Asst. Law Librarian	Sadie E. Sapp.....	Olympia
Superintendent Traveling Library	Mrs. Lou G. Diven.....	Olympia
State Fish Commissioner and Chief		
State Game Warden	Leslie H. Darwin.....	Seattle

Deputy State Game Warden.....	Joseph Stingle.....	Spokane
Coal Mine Inspector	James Bagley.....	Seattle
Public Printer	Frank M. Lamborn.....	Olympia
Bank Examiner	L. H. Moore.....	Olympia
Deputy Examiners	R. B. Motherwell.....	Seattle
	Claude P. Hay.....	Sultan
	Geo. F. Palmer.....	Hoquiam
	C. R. Hupp.....	Oakesdale
	John A. Vanderpoll.....	Spokane
Hotel Inspector	J. F. Myhan.....	Tacoma
Fire Warden	F. E. Pape.....	Olympia
Highway Commissioner	James Allen.....	Olympia
Assistant Highway Commr.	J. A. Davis.....	Olympia
State Geologist	Henry Landes.....	Seattle
State Chemists	Geo. A. Olson.....	Pullman
	Chas. W. Johnson.....	Seattle
State Commissioner of Health	Dr. T. D. Tuttle.....	Seattle
State Fiscal Agency	The Equitable Trust Co. of America	New York
State Superintendent of Weights and Measures	I. M. Howell, Ex-officio.....	Olympia
Deputy Supt. of Weights and Measures.....	W. B. Newcomb.....	Olympia
Inspector of Weights and Measures.....	Mary Anderson.....	Olympia
Commissioner of Statistics.....	I. M. Howell, Ex-officio.....	Olympia
Deputy Commr. of Statistics.....	Harry F. Giles.....	Olympia
Clerk of Supreme Court.....	C. S. Reinhart.....	Olympia
Superintendent of Election Division.....	Ira Honefenger.....	Olympia
State Printing Expert.....	W. S. Bloom.....	Olympia
Hydraulic Engineer	Marvin Chase.....	Olympia
Assistant Hydraulic Engineer.....	Chas. J. Bartholet.....	Olympia

EX-OFFICIO BOARDS AND COMMISSIONS.

Board of Finance.....	Governor	Olympia
	State Auditor.....	Olympia
	State Treasurer.....	Olympia
Historical Building Commission	Governor	Olympia
	Secretary of State.....	Olympia
	State Treasurer.....	Olympia
Board of State Land Commissioners.....	Land Commissioner.....	Olympia
	Secretary of State.....	Olympia
	State Treasurer.....	Olympia
Board of Equalization	State Auditor.....	Olympia
	Land Commissioner.....	Olympia
	Tax Commissioner.....	Olympia
Public Archives Commission	Governor	Olympia
	Secretary of State.....	Olympia
	State Auditor.....	Olympia
Board of Geological Survey	Governor	Olympia
	Lieutenant Governor.....	Tacoma
	State Treasurer.....	Olympia
	Pres. Univ. of Washington....	Seattle
	Pres. Wash. State College....	Pullman
Public Property Commission	Secretary of State.....	Olympia
	State Auditor.....	Olympia
	State Treasurer.....	Olympia
Oyster Commission	Governor	Olympia
	Land Commissioner.....	Olympia
	Fish Commissioner.....	Olympia

Library Commission	Governor	Olympia
	Attorney General.....	Olympia
	Supreme Court Judges.....	Olympia
State Highway Board	Governor	Olympia
	State Treasurer.....	Olympia
	One Member Pub. Serv. Com..	Olympia
	State Auditor.....	Olympia
	Highway Commissioner.....	Olympia
Board of Fish Commissioners.....	Governor	Olympia
	State Treasurer.....	Olympia
	State Fish Commissioner.....	Seattle
Washington State Historical Society.....	Governor	Olympia
	Secretary of State.....	Olympia
	State Treasurer.....	Olympia
Secretary.....	W. P. Bonney.....	Tacoma
State Canvassing Board.....	Secretary of State.....	Olympia
	State Auditor.....	Olympia
	State Treasurer.....	Olympia
State Board of Voting Machine Examiners..	Governor	Olympia
	Secretary of State.....	Olympia
	State Treasurer.....	Olympia

STATE BOARDS AND COMMISSIONS.

Agricultural Advisory Board	Ernest Lister.....	Olympia
	E. E. Flood.....	Spokane
	George Severance.....	Pullman
	Dr. Granville Lowther.....	Yakima
Secretary.....	E. F. Benson.....	Olympia
Bank Guaranty Fund Board.....	Ernest Lister, Ex-officio.....	Olympia
	L. H. Moore, Ex-officio.....	Olympia
	J. E. Chillberg.....	Seattle
	R. L. Rutter.....	Spokane
	J. P. Duke.....	Palouse
Board of Accountancy.....	Wm. McAdam.....	Seattle
	Ole S. Larson.....	Seattle
	George Shedden.....	Tacoma
	Alfred Lister.....	Tacoma
Secretary.....	Rodney D. White.....	Seattle
Board of Barber Examiners.....	H. C. Pickering.....	Tacoma
Secretary.....	A. A. Giersch.....	Seattle
	M. B. Bridgford.....	Spokane
Board of Control	W. H. Cochran.....	Olympia
	G. Dowe McQuesten.....	Olympia
	T. E. Skaggs.....	Olympia
Secretary.....	G. W. Belt.....	Olympia
Board of Dental Examiners.....	J. T. Allen.....	Dayton
	Dr. Rodney L. Hearne.....	Seattle
	Randall S. Williams.....	Tacoma
	R. M. Andruss.....	Woodland
Secretary.....	Frank B. Lynott.....	Spokane
Board of Education	State Supt. Pub. Instr.....	Olympia
	Pres. Univ. of Wash.....	Seattle
	Pres. Wash. State College.....	Pullman
	Geo. H. Black.....	Ellensburg
	Wm. F. Gelger.....	Tacoma
	H. M. Hart.....	Spokane
	Georgian Donald.....	Okanogan
Acting Secretary.....	Arthur Wilson.....	Olympia

Board of Embalmers	W. B. Buckley.....Tacoma
	Dave P. Bailey.....Waitsburg
Ex-officio Secretary.....	Dr. T. D. Tuttle.....Seattle
Board of Medical Examiners.....	Dr. D. M. Stone.....Seattle
	Dr. A. J. Nelson.....Seattle
	Dr James A. MacLachlan.....Dayton
	Elmer Hill.....Walla Walla
	Dr. Royal A. Gove.....Tacoma
	Dr. J. E. Hodgson.....Spokane
	Dr. Elmer D. Olmsted.....Spokane
	Dr. H. F. Morse.....Wenatchee
Secretary.....	Dr C. N. Suttner.....Walla Walla
Board of Health and Vital Statistics.....	J. R. Brown.....Tacoma
	H. H. McCarthy.....Spokane
	Frederick R. Hedges.....Everett
	Mrs. Marion M. McCreedie....Sunnyside
	E. F. Benson.....Olympia
Secretary.....	Dr. T. D. Tuttle.....Seattle
Board of Optometry.....	I. M. Radabaugh.....Spokane
	Charles G. Holcomb.....Seattle
Secretary.....	Maude Coles Whitlock.....Tacoma
Board of Pharmacy	C. Osseward.....Seattle
	F. D. Marr.....Tacoma
	G. C. Norton.....Tacoma
	V. T. McCroskey.....Colfax
Secretary.....	D. B. Garrison.....Connell
Board of Chiropody	G. R. Davis.....Seattle
	J. C. McCain.....Tacoma
	Margaret D. Cover.....Spokane
Bureau of Inspection and Supervision of Public Offices	C. W. Clausen, Ex-officio Chief Olympia
	Al Helander.....Olympia
	James F. Leghorn.....Olympia
	Fred D. Chesnut.....Olympia
Secretary.....	Hattie M. Watson.....Olympia
State Labor Commissioner	C. H. Younger.....Olympia
Asst. State Labor Commr.	Marie Pidgeon.....Seattle
Secretary	Miss E. K. Dahlberg.....Olympia
Forest Commission	Clark V. Savidge.....Olympia
	Ed. English.....Mt. Vernon
	Pat McCoy.....Seattle
	W. W. Emery.....Napavine
	Frank B. Cole.....Tacoma
Secretary.....	F. E. Pape.....Olympia
Industrial Insurance Commission.....	H. L. Hughes.....Olympia
	J. W. Brislawn.....Olympia
	Donald A. McDonald.....Olympia
Secretary.....	P. Gilbert.....Olympia
Library Advisory Board	J. B. Kaiser.....Tacoma
	Mrs. Henry McCleary.....McCleary
	Mrs. O. K. Williamson.....Prosser
	Mrs. Sarah McMillian Patton..Hoquiam

State Medical Aid Board.....	Dr. J. W. Mowell, Chief Medical Advisor, Ex-officio Member and Chairman	Olympia
	Dr. W. H. Watson.....	Olympia
	Alex Polson.....	Hoquiam
	Martin Flyzik.....	Seattle
Secretary.....	R. J. McLean.....	Olympia
State Nautical Board	Frank Waterhouse.....	Seattle
	J. D. Trenholme.....	Seattle
	James Gibson.....	Seattle
Nurses' Examining Board	Anna Phillips (Pres.).....	Tacoma
	Helen K. Lester.....	Spokane
	May S. Loomis.....	Seattle
Secretary.....	Ella A. Wilkinson.....	Bellingham
State Board of Park Commissioners.....	Ernest Lister.....	Olympia
	Clark V. Savidge.....	Olympia
	C. W. Clausen.....	Olympia
	W. W. Sherman.....	Olympia
State Capitol Commission	Ernest Lister.....	Olympia
	C. W. Clausen.....	Olympia
	Mark E. Reed.....	Shelton
	A. H. Chambers.....	Olympia
	C. R. Jackson.....	Olympia
Secretary.....	Clark V. Savidge.....	Olympia
Asst. Secretary.....	W. M. Duncan.....	Olympia
Bar Examiners	Elmer E. Todd.....	Seattle
	Dix H. Rowland.....	Tacoma
	Arthur W. Davis.....	Spokane
Secretary.....	C. S. Reinhart.....	Olympia
Public Service Commission	E. F. Blaine.....	Olympia
	Arthur A. Lewis.....	Olympia
	Frank R. Spinning.....	Olympia
Secretary.....	J. H. Brown.....	Olympia
Chief Grain Inspector	P. J. Sweeney.....	Tacoma
Industrial Welfare Commission.....	C. H. Younger.....	Olympia
	Mrs. W. H. Udall.....	Tacoma
	M. H. Marvin.....	Tacoma
Secretary.....	Mrs. Frances King Headlee....	Olympia
Tax Commissioner	C. R. Jackson.....	Olympia
Asst. Tax Commissioner	Geo. G. Hannan.....	Olympia
Uniform Legislation Commission.....	Charles E. Sheppard.....	Seattle
	Alfred Battle.....	Seattle
	W. V. Tanner.....	Olympia
Veterinary Examining Board	E. F. Benson.....	Olympia
	Robert Prior.....	Yakima
Secretary.....	J. T. Seely.....	Seattle
State Humane Bureau	Ernest Lister.....	Olympia
	W. V. Tanner.....	Olympia
	Josephine Corliss Preston....	Olympia
	C. E. Muckler.....	Tacoma
	Chas. M. Farrer.....	Seattle
Secretary.....	Harry L. Parr.....	Olympia

STATE INSTITUTIONS.

Board of Regents University of Washington	{	O. A. Fechter (Pres.).....	Yakima
		John A. Rea.....	Tacoma
		William T. Perkins.....	Seattle
		Eldridge Wheeler.....	Montesano
		Winlock W. Miller.....	Seattle
		Dr. W. A. Shannon.....	Seattle
Board of Regents State College of Washington	{	Mrs. Ruth Karr McKee.....	Olympia
		W. A. Ritz (Pres.).....	Walla Walla
		E. T. Coman.....	Spokane
		R. C. McCroskey.....	Garfield
		W. M. Pease.....	Seattle
		A. D. Dunn.....	Wapato
Trustees State Normal School Cheney	{	Mary A. Monroe.....	Spokane
		T. V. Tustin.....	Spokane
		Chas. A. McLean.....	Spokane
		N. D. Showalter (Pres.).....	Cheney
Trustees State Normal School Bellingham	{	Thomas Smith.....	Mt. Vernon
		F. J. Barlow.....	Bellingham
		C. M. Olson.....	Bellingham
		G. W. Nash (Pres.).....	Bellingham
Trustees State Normal School Ellensburg	{	Fred P. Wolff.....	Ellensburg
		H. E. Lucas.....	Yakima
		Sue M. Horsley.....	Yakima
		Geo. H. Black (Pres.).....	Ellensburg
State School for Deaf.....		W. M. Kilpatrick (Supt.)....	Vancouver
State School for Blind.....		Sadie E. Hall (Supt.).....	Vancouver
State Training School		Thos. P. Horn (Supt.).....	Chehalis
State School for Girls		Mary Campbell (Supt.)....	Grand Mound
State Soldiers' Home		Ed. C. Warner (Supt.).....	Orting
Washington Veterans' Home.....		John J. See (Supt.).....	Pt. Orchard
Western Hospital for Insane.....		Dr. W. N. Keller (Supt.)..	Ft. Steilacoom
Eastern Hospital for Insane.....		Dr. A. S. Oliver, Jr. (Supt.)	Medical Lake
Northern Hospital for Insane.....		Dr. J. W. Doughty (Supt.)	Sedro Woolley
State Penitentiary		Henry Drum (Supt.).....	Walla Walla
State Institution for Feeble Minded.....		S. C. Woodruff (Supt.)....	Medical Lake
State Reformatory		G. Dowe McQuesten.....	Tacoma
		T. E. Skaggs.....	Olympia
		W. H. Cochran.....	Olympia
		F. F. Swale.....	Everett
Superintendent.....		Donald B. Olson.....	Monroe

STATE OF WASHINGTON

LEGISLATIVE ROSTER

SIXTEENTH SESSION

1919

CONVENES JANUARY 13

ADJOURNS MARCH 13

SENATE

MEMBERS OF THE SENATE, SIXTEENTH SESSION, 1919.

No. Dist.	NAME	COUNTIES REPRESENTED	P. O. ADDRESS	POLITICS
1	†W. A. Bolinger.....	[Grant.....] [Douglas.....] [Ferry.....] [Okanogan.....] [Stevens.....] [Pend Oreille..]	Methow	Republican
2	W. Lon Johnson.....	[Spokane.....] [Spokane.....] [Spokane.....] [Spokane.....] [Spokane.....] [Whitman.....] [Whitman.....]	Colville	Republican
3	*Harve H. Phipps.....	[Spokane.....]	1408 Montgomery, Spokane.....	Republican
4	*R. A. Hutchinson.....	[Spokane.....]	S. 1703 Grand, Spokane.....	Republican
5	*E. Ben Johnson.....	[Spokane.....]	Spokane	Republican
6	Guy B. Groff.....	[Spokane.....]	W. 204 14th Ave., Spokane.....	Republican
7	Edwin T. Ooman.....	[Spokane.....]	W. 1227 9th Ave., Spokane.....	Republican
8	Oliver Hall.....	[Whitman.....]	Colfax	Republican
9	†W. C. McCoy.....	[Whitman.....]	Oakesdale	Republican
10	*Elgin V. Kuykendall.....	[Columbia.....] [Garfield.....] [Asotin.....] [Adams.....] [Franklin.....] [Walla Walla..]	Pomeroy	Republican
11	*Oliver T. Cornwell.....	[Walla Walla..]	571 Boyer, Walla Walla.....	Republican
12	*D. H. Cox.....	[Walla Walla..]	Walla Walla	Republican
13	*John H. Ferryman.....	[Kittitas.....] [Chelan.....]	Wenatchee	Democrat
14	*Charles E. Myers.....	[Lincoln.....]	Davenport	Republican
15	*D. V. Morthland.....	[Yakima.....] [Benton.....] [Skamania.....] [Klickitat.....]	801 Pleasant, Yakima.....	Republican
16	John C. Crawford.....	[Yakima.....] [Benton.....] [Skamania.....] [Klickitat.....]	Grand Dalles	Republican
17	*Edward L. French.....	[Clarke.....]	R. F. D. No. 1, Vancouver.....	Republican
18	*Frank G. Barnes.....	[Cowlitz.....]	Silver Lake	Republican
19	P. L. Sinclair.....	[Pacific.....] [Wahkiakum..]	Seaview	Republican
20	*A. E. Judd.....	[Lewis.....]	Ohehalls	Democrat
21	Fred W. Loomis.....	[Grays Harbor..]	Aberdeen	Republican
22	*P. H. Carlson.....	[Thurston.....]	Olympia	Republican
23	*Peter Iverson.....	[Mason.....] [Kitsap.....] [Island.....] [Clallam.....] [Jefferson.....] [San Juan.....]	Poulsbo	Republican
24	Wm. Bishop.....	[Jefferson.....] [San Juan.....]	Chimacum	Republican
25	†E. J. Young.....	[Pierce.....]	Sumner	Republican
26	Ralph Metcalf.....	[Pierce.....]	918 N. Yakima, Tacoma.....	Republican
27	*Walter S. Davis.....	[Pierce.....]	U. of Puget Sound, Tacoma.....	Republican
28	*Wilburn Fairchild.....	[Pierce.....]	313 S. 32nd, Tacoma.....	Republican
29	A. V. Fawcett.....	[Pierce.....]	7006 S. J St., Tacoma.....	Republican
30	Howard D. Taylor.....	[King.....]	Eagle Gorge	Republican
31	I. G. O'Harra.....	[King.....]	9530 Rainier Ave., Seattle.....	Democrat
32	Daniel Landon.....	[King.....]	4115 Fremont Ave., Seattle.....	Republican
33	William Wray.....	[King.....]	833 34th Ave. S., Seattle.....	Republican
34	T. D. Rockwell.....	[King.....]	613 Minor Ave., Seattle.....	Republican
35	Frank H. Renick.....	[King.....]	1424 Belmont Ave., Seattle.....	Republican
36	Fred W. Hastings.....	[King.....]	2 Prospect St., Seattle.....	Republican
37	Geo. B. Lamping.....	[King.....]	1127 23th N., Seattle.....	Republican
38	*Joseph H. Smith.....	[Snohomish.....]	Everett	Republican
39	Magnus G. Thome.....	[Snohomish.....]	Florence	Republican
40	W. V. Wells.....	[Skagit.....]	Anacortes	Republican
41	*Ed Brown.....	[Whatcom.....]	Custer	Republican
42	E. J. Cleary.....	[Whatcom.....]	507 14th Ave., Bellingham.....	Republican

* Holdover.

† Elected to fill unexpired term.

HOUSE

MEMBERS OF THE HOUSE OF REPRESENTATIVES, SIXTEENTH SESSION, 1919.

No. Dist.	NAME	COUNTIES REPRESENTED	P. O. ADDRESS	POLITICS
1	Albert I. Kulzer.....	Stevens.....	Chewelah.....	Democrat
1	Al. Weatherman.....	Stevens.....	Addy.....	Democrat
2	Arthur L. True.....	Spokane.....	N. 628 Perry St., Spokane.....	Republican
2	L. L. Westfall.....	Spokane.....	1808 W. Nora Ave., Spokane.....	Republican
3	J. B. Gilbert.....	Spokane.....	Freeman.....	Republican
3	Albert A. Kelly.....	Spokane.....	4100 Sprague Ave., Spokane.....	Republican
4	Olaf L. Olsen.....	Spokane.....	Deer Park.....	Republican
4	A. B. Stratton.....	Spokane.....	R. F. D. No. 7, Spokane.....	Republican
5	Maurice Smith.....	Spokane.....	708 W. 20th Ave., Spokane.....	Republican
5	John D. Bassett.....	Spokane.....	29 W. 17th Ave., Spokane.....	Republican
6	John Anderson.....	Spokane.....	Apt. 12, San Marco, Spokane.....	Republican
6	Fred A. Adams.....	Spokane.....	1641 S. Maple St., Spokane.....	Republican
7	Frank E. Sanger.....	Whitman.....	Pullman.....	Republican
7	Roy Jones.....	Whitman.....	Penawawa.....	Republican
8	D. F. Trimble.....	Whitman.....	Palouse.....	Republican
8	W. M. Anderson.....	Whitman.....	Tekoa.....	Republican
9	John L. Wormell.....	Asotin.....	Anatone.....	Democrat
10	J. T. Ledgerwood.....	Garfield.....	Pomeroy.....	Democrat
11	Harry P. Kennedy.....	Columbia.....	Dayton.....	Republican
12	W. H. Kirkman.....	Walla Walla.....	214 Colville St., Walla Walla.....	Republican
13	E. J. Cantonwine.....	Walla Walla.....	922 E. Alder St., Walla Walla.....	Republican
13	N. B. Atkinson.....	Walla Walla.....	Waitsburg.....	Republican
14	Logan L. Long.....	Franklin.....	Connell.....	Republican
15	J. L. Cross.....	Adams.....	Ritzville.....	Republican
16	F. B. Teter.....	Lincoln.....	Davenport.....	Republican
16	W. O. Mansfield.....	Lincoln.....	Davenport.....	Republican
17	E. F. Banker.....	Okanogan.....	Winthrop.....	Democrat
18	E. W. Pawley.....	Douglas.....	Waterville.....	Republican
19	J. O. Hubbell.....	Kittitas.....	Ellensburg.....	Republican
19	G. P. Short.....	Kittitas.....	Ellensburg.....	Republican
20	William F. Sawyer.....	Yakima.....	R. F. D., Wapato.....	Republican
20	Howard O. Lucas.....	Yakima.....	Yakima.....	Republican
21	John A. Miller.....	Klickitat.....	Goldendale.....	Republican
22	Walter G. Hufford.....	Skamania.....	Stevenson.....	Republican
22	George McCoy.....	Clarke.....	Vancouver.....	Republican
23	O. W. Ryan.....	Clarke.....	Vancouver.....	Republican
24	William H. Adams.....	Cowlitz.....	Castle Rock.....	Republican
25	Joseph Girard.....	Wahkiakum.....	Oathlamet.....	Republican
26	Fred B. Norman.....	Pacific.....	448 8th St., Raymond.....	Republican
27	Judson S. Siler.....	Lewis.....	Vance.....	Republican
27	H. H. Swofford.....	Lewis.....	Chehalis.....	Republican
27	H. W. Thompson.....	Lewis.....	Centralia.....	Republican
28	O. O. Aspinwall.....	Thurston.....	R. No. 1, Olympia.....	Republican
28	J. O. Marts.....	Thurston.....	110 West 19th St., Olympia.....	Republican
29	Phil S. Locke.....	Grays Harbor.....	Aberdeen.....	Republican
29	H. B. Dollar.....	Grays Harbor.....	Malone.....	Republican
30	N. P. Nelson.....	Grays Harbor.....	Hoquiam.....	Republican
31	Mark E. Reed.....	Mason.....	Shelton.....	Republican
32	J. Howard Shattuck.....	Kitsap.....	Port Orchard.....	Republican
33	Charles E. Ooon.....	Jefferson.....	Port Townsend.....	Republican
33	Herbert B. Gardner.....	Jefferson.....	Gardner.....	Republican
34	O. L. Babcock.....	Clallam.....	Port Angeles.....	Republican
35	Elmer E. Healey.....	Pierce.....	505 5th Ave. N. W., Puyallup.....	Republican
35	Abe Morris.....	Pierce.....	Morristown.....	Republican
36	Fred G. Remann.....	Pierce.....	4212 N. Stevens St., Tacoma.....	Republican
36	William O. Elliott.....	Pierce.....	3716 N. Adams St., Tacoma.....	Republican
37	J. H. Davis.....	Pierce.....	812 S. Ainsworth Ave., Tacoma.....	Republican
37	Fred A. Smith.....	Pierce.....	317 S. G St., Tacoma.....	Republican

MEMBERS OF THE HOUSE OF REPRESENTATIVES—Concluded.

No. Dist.	NAME	COUNTIES REPRESENTED	P. O. ADDRESS	POLITICS
38	Frances M. Haskell.....	Pierce.....	214 S. 32nd St., Tacoma.....	Republican
38	George W. Thompson.....	Pierce.....	1102 E. 31st St., Tacoma.....	Republican
39	Robert Gleason.....	Pierce.....	1214 S. J St., Tacoma.....	Republican
39	Claude A. Young.....	Pierce.....	4110 S. Yakima Ave., Tacoma.....	Republican
40	Fred Mess.....	King.....	Orilla.....	Republican
40	James T. Jones.....	King.....	Kent.....	Republican
40	Walter J. Lunn.....	King.....	Auburn.....	Republican
41	Alfred E. Miller.....	King.....	5211 30th S., Seattle.....	Democrat
41	Evan Thomas.....	King.....	New Castle.....	Republican
42	George N. Hodgdon.....	King.....	5643 Brooklyn Ave., Seattle.....	Democrat
42	H. O. Bohlke.....	King.....	6208 Sycamore Ave., Seattle.....	Democrat
43	Pliny L. Allen.....	King.....	2322 32nd Ave. S., Seattle.....	Republican
43	Frank G. Myers.....	King.....	1109 26th Ave. S., Seattle.....	Republican
44	W. W. Conner.....	King.....	711 White Bldg., Seattle.....	Republican
44	Frank H. Manogue.....	King.....	511 3rd Ave., Seattle.....	Republican
45	C. O. Qualheim.....	King.....	1700 Terry Ave., Seattle.....	Republican
45	Robert Grass.....	King.....	1220 Summit, Seattle.....	Republican
46	Stephen A. Hull.....	King.....	2129 8th Ave. W., Seattle.....	Republican
46	Frank Otterill.....	King.....	233 Taylor Ave., Seattle.....	Democrat
47	W. M. Pease.....	King.....	715 21st N., Seattle.....	Republican
47	E. H. Guile.....	King.....	745 Bellevue N., Seattle.....	Republican
48	S. Frank Spencer.....	Snohomish.....	Everett.....	Republican
48	George W. Adamson.....	Snohomish.....	Everett.....	Republican
49	C. W. Gorham.....	Snohomish.....	Snohomish.....	Republican
49	C. W. Anguish.....	Snohomish.....	Snohomish.....	Republican
50	James Zylstra.....	Island.....	Coupeville.....	Republican
51	J. M. Shields.....	Skagit.....	Mt. Vernon.....	Republican
51	J. M. Harrison.....	Skagit.....	Sedro Woolley.....	Republican
51	Fred B. Fulton.....	Skagit.....	Anacortes.....	Republican
52	E. H. Nash.....	San Juan.....	Friday Harbor.....	Republican
53	Tom Brown.....	Whatcom.....	Sumas.....	Republican
53	C. H. Hoff.....	Whatcom.....	Lawrence.....	Republican
54	Chas. I. Roth.....	Whatcom.....	2401 Elm St., Bellingham.....	Republican
54	David F. Trunkay.....	Whatcom.....	1911 Dupont St., Bellingham.....	Republican
55	R. B. Coleman.....	Ferry.....	Inchelium.....	Democrat
56	John A. Gellatly.....	Chelan.....	Wenatchee.....	Republican
56	Gordon C. Moores.....	Benton.....	Richland.....	Republican
59	H. D. McMillen.....	Grant.....	Ephrata.....	Republican
60	Fred L. Wolf.....	Pend Oreille.....	Newport.....	Republican

NON-PARTISAN JUDICIARY.

SUPREME COURT JUDGES.

Chief Justice.....	Stephen J. Chadwick.....	Olympia
	Mark A. Fullerton	Colfax
	John F. Main	Seattle
	O. R. Holcomb.....	Ritzville
	John R. Mitchell	Olympia
	Wallace Mount	Spokane
	Emmett N. Parker	Tacoma
	Kenneth Mackintosh.....	Seattle
	Warren W. Tolman	Spokane

SUPERIOR COURT JUDGES.

Adams County.....	John Truax	Ritzville
Asotin County.....	Chester F. Miller	Dayton
Benton County.....	John Truax	Ritzville
Chelan County.....	Wm. A. Grimshaw	Wenatchee
Clallam County.....	John M. Ralston	Port Angeles
Clarke County.....	R. H. Back	Vancouver
Columbia County.....	Chester F. Miller.....	Dayton
Cowlitz County.....	W. T. Darch	Kalama
Douglas County.....	Sam B. Hill	Waterville
Ferry County.....	C. H. Neal	Oroville
Franklin County.....	John Truax	Ritzville
Garfield County.....	Chester F. Miller	Dayton
Grant County.....	Sam B. Hill	Waterville
Grays Harbor County.....	Ben Sheeks	Montesano
	Geo. D. Abel	Montesano
Island County.....	John M. Ralston	Port Angeles
Jefferson County.....	John M. Ralston	Port Angeles
King County.....	A. W. Frater	Seattle
	J. T. Ronald	Seattle
	Clay Allen	Seattle
	King Dykeman	Seattle
	Mitchell Gilliam	Seattle
	Boyd J. Tallman	Seattle
	Calvin S. Hall	Seattle
	John S. Jurey	Seattle
	Everett Smith	Seattle
Kitsap County.....	Walter M French	Pt. Orchard
Kittitas County.....	John B. Davidson	Ellensburg
Klickitat County.....	W. T. Darch	Kalama
Lewis County.....	W. A. Reynolds	Chehalis
Lincoln County.....	Joseph Sessions	Davenport
Mason County.....	John M. Wilson	Olympia
	D. F. Wright	Shelton
Okanogan County.....	C. H. Neal	Oroville
Pacific County.....	H. W. B. Hewen.....	South Bend
Pend Oreille County.....	Daniel Henry Carey	Colville
Pierce County.....	Ernest M. Card	Tacoma
	W. O. Chapman	Tacoma
	M. L. Clifford	Tacoma
	John M. Fletcher	Tacoma
San Juan County.....	Augustus Brawley	Mt. Vernon
Skagit County.....	Augustus Brawley	Mt. Vernon
Skamania County.....	W. T. Darch	Kalama
Snohomish County.....	Ralph C. Bell	Everett
	Guy C. Alston	Everett
Spokane County.....	Wm. A. Huneke	Spokane
	Bruce Blake	Spokane
	David W. Hurn	Spokane

	Hugo E. Oswald	Spokane
	R. M. Webster	Spokane
Stevens County.....	Daniel Henry Carey	Colville
Thurston County.....	John M. Wilson	Olympia
	D. F. Wright	Shelton
Wahkiakum County.....	H. W. B. Hewen.....	South Bend
Walla Walla County.....	Edward C. Mills.....	Walla Walla
Whatcom County.....	Ed. E. Hardin	Bellingham
	Wm. H. Pemberton.....	Bellingham
Whitman County.....	R. L. McCroskey	Colfax
Yakima County.....	George B. Holden	Yakima
	Harcourt M. Taylor.....	Yakima

COUNTY OFFICERS OF WASHINGTON FOR THE TERM COMMENCING JANUARY 6, 1919.

Counties	County Seat	Sheriff	Clerk	Auditor	Treasurer
1 Adams	Ritzville	George N. McCollom	J. C. Hauschild	Laura Schragg	Elizabeth M. Meyer
2 Asotin	Asotin	C. E. Wallace	J. Swain	Lillie Ausman	G. A. Fraser
3 Benton	Prosser	L. C. Rolph	Edmond L. Stewart	Kathryn Severyns	Geo. Starr
4 Chelan	Wenatchee	Bert McManus	A. A. Stevens	A. V. Shephard	Geo. R. Fisher
5 Clallam	Port Angeles	A. J. Cossar	Sam C. Rickson	R. D. McLaughlin	E. S. Stewart
6 Clarke	Vancouver	Geo. M. Johnson	Jos. E. Hall	T. L. McClure	T. L. Henrichsen
7 Columbia	Dayton	J. F. Gemmell	Cephas Morgan	J. F. Clancy	Blanche Beckett
8 Cowlitz	Kalama	J. W. Hoggatt	Hite Inus	R. A. Davis	L. P. Brown
9 Douglas	Waterville	A. H. Damm	L. L. Sellers	Bernice F. Stanley	J. F. Irwin
10 Ferry	Republic	James L. Moore	Lois Casey	A. R. Cox	W. T. O'Connell
11 Franklin	Pasco	James S. Hays	Mrs. C. C. Robinson	A. C. MacNulty	Celestia Sente
12 Garfield	Pomeroy	W. H. Dixon	Hiram Dickson	Violetta Scott	Irene Bruce
13 Grant	Ephrata	Mack Deyons	Al Terry	A. C. Banko	John B. Orton
14 Grays Harbor	Montesano	Jeff Bartell	Bessie F. Davis	Ethel Baker	Stella Woodward
15 Island	Coupeville	Hugh H. Williams	Ruth M. Terry	Howard Libbey	John B. Hart
16 Jefferson	Port Townsend	Martin Herstrom	Harry C. McCormack	Mae M. Plummer	Harry A. Gaines
17 King	Port Orchard	John Stringer	Percy F. Thomas	Norman M. Wardall	Wm. A. Gordon
18 Kitsap	Seattle	D. J. Davis	Guy L. Wetzel	J. M. Peterson	R. E. Damerow
19 Kittitas	Ellensburg	J. W. Thomas	M. A. Hofmann	M. R. Dixon	W. G. Damerow
20 Klickitat	Goldendale	Ira Henderson	Annie Wier Forsyth	Roy E. Crooks	F. H. Anderson
21 Lewis	Chehalis	J. F. Berry	Corra L. Black	Eva Knight	Jas. McClure
22 Lincoln	Davenport	F. B. Rennie	Cora L. Sanderson	Estelle A. Howard	C. C. Gibson
23 Mason	Shelton	Ralph W. Potts	Hattie E. Rucker	Ione Doyle	Ada C. Clothier
24 Okanogan	Harvey E. Stark	Harry E. Stark	Margaret E. Ward	J. D. Hubbard	Roy W. Smith
25 Pacific	South Bend	A. B. McDonald	A. D. Gillies	Oren C. Willson	W. E. Lovering
26 Pend Oreille	Newport	F. H. Deering	A. F. Sadler	S. M. McGee	Louise S. Lewis
27 Pierce	Tacoma	Thos. N. Morris	Geo. F. Murray	C. A. Campbell	Wm. Turner
28 San Juan	Friday Harbor	C. E. Hackett	N. E. Churchill	Fred E. Kirby	B. O. Cahall
29 Skagit	Mount Vernon	Chas. Stevenson	Nina Barron	Edith Swanberg	Will R. Wells
30 Skamania	Stevenson	J. F. Sweeney	J. B. Gray	Eddy P. Mitchell	S. M. Eddings
31 Snohomish	Everett	James McCulloch	Adrian Hulbert	P. T. Lee	D. Carl Pearson
32 Spokane	Spokane	Geo. L. Reid	Emercy P. Gilbert	Joseph A. Stewart	Edward R. Ennis
33 Stevens	Colville	W. H. Graham	W. H. Butler	Will C. Spedden	Sarilda McKown
34 Thurston	Olympia	J. H. Gifford	V. A. Milroy	H. L. Lewis	Fred W. Stocking
35 Wahkiakum	Cahlanet	Robert Irving	May B. Watkins	Janet G. Ingram	A. F. Cooper
36 Walla Walla	Walla Walla	David Yates	E. J. Brunton	Guy Allen Turner	E. S. Burton
37 Whitcom	Bellevue	Will D. Wallace	Geo. M. Cook	J. A. Miller	Frank Wilson
38 Yakima	Yakima	H. S. McClure	M. C. True	A. L. Maxwell	B. F. Manning
39		Samuel Hutchinson	Frank D. Clemmer	Ruth L. Hutchinson	J. F. Peters

COUNTY OFFICERS OF WASHINGTON—CONTINUED.

Counties	Attorney	Assessor	School Supt.*	Engineer
1 Adams	Otto W. Naef	J. H. Perkins	Edna L. DeSpain	F. R. Hewett
2 Asotin	Elmer E. Halsey	M. J. Garrison	C. B. Thornton	L. K. Brown
3 Benton	Lon Boyle	E. F. Rupert	Lowa M. Crawford	Guy H. Heberling
4 Chelan	W. F. Whitney	Ernest G. Spencer	J. Frank Casebeer	Fred M. Berry
5 Clallam	Frank L. Plummer	J. O. Morse	Ina M. McNutt	Wm. J. Ware
6 Clarke	W. E. Yates	John G. Eddings	Chester F. Bennett	B. L. Dorman
7 Columbia	F. Appleton	E. V. Thompson	W. W. Hendron	Wilson McBride
8 Cowlitz	Delos Spaulding	W. M. McCoy	Joe Gardner	Fred C. Cramer
9 Douglas	Warren N. Wilson	C. H. Hazleton	Mrs. L. O. Anderson	R. L. Richards
10 Ferry	James T. Johnson	J. W. MacCool	Blanche Eustis	D. C. Warfel
11 Franklin	E. M. Gibbons	Mrs. J. M. Arnett	Edith K. Peck	E. D. Sheffield
12 Grant	A. G. Forley	J. H. White	Francis J. Gimplin	W. J. Sisson
13 Island	N. W. Washington	R. A. Wiley	J. Elmer Bovey	C. W. Duncan
14 Grays Harbor	W. H. Tucker	R. A. Wiley	T. W. Bibb	H. S. Shorey
15 Jefferson	John C. Richards	Ernest E. Gaskill	Alfred Perks	Thomas C. Clark
16 King	Tom W. Holman	W. P. Elliott	Elva S. Edwards	Clyde L. Peach
17 Kittitas	Fred C. Brown	Frank W. Hull	A. S. Burrows	Samuel J. Humes
18 Klaskanine	H. E. Gorman	John F. Anderson	Geo. T. Crockett	Josiah Gideon
19 Klickitat	F. A. McGuire	W. B. Price	S. A. Bartlett	H. A. Murray
20 Lewis	A. L. Smith	F. W. Hurd	C. M. Ryman	Geo. W. Borden
21 Lincoln	Herman Allen	J. H. Leatherwood	Z. May Mighen	Ernst C. Bechly
22 Mason	M. E. Jesseph	Madge Jones	W. S. Shelton	J. L. Thayer
23 Okanogan	W. C. Logan	I. B. Shelton	Mary M. Knight	Arthur L. Ward
24 Pacific	Herman Murray	G. E. Fore	M. Bahterhoff	Horace E. Smith
25 Pend Oreille	Sidney W. Rogers	Z. E. Brown	Edith Soper	H. A. Gibbs
26 Pierce	Wm. D. Askren	F. E. Davenport	Mamie F. Johnson	J. C. Stegner
27 San Juan	Brooke M. Wright	Harry C. Austin	Minnie D. Bean	Ernest A. White
28 Skagit	W. L. Brickey	John L. Murray	Carrie M. Busby	H. L. Corlin
29 Skamania	Raymond C. Sly	Jess E. Russell, Jr.	Mabel Graham	R. W. McKinstry
30 Snohomish	Thos. A. Stiger	John C. Wachter	W. E. Miller	George E. Linn
31 Stevens	Joseph E. Lindsley	Wm. Whitfield	F. V. Yeager	F. G. Tegtmeyer
32 Thurston	Osee W. Noble	Elmer H. Bartlett	F. V. Yeager	Allan R. Scott
33 Tahoma	Thos. L. O'Leary	Wm. Billings	W. O. Cummings	C. A. Heberling
34 Walla Walla	Wm. Stuart	Geo. Gaston	Fred J. Brown	Conrad O. Mannes
35 Whitman	Earl W. Benson	George F. Hanigan	Maude K. Butler	George O. Lee
36 Yakima	Loomis Baldrey	Dr. H. S. Buffum	Mary Gilliam	E. S. Clark
37	Geo. A. Weldon	Alex Van Wyck	Jennie M. Robin	J. C. Hills
38		John M. Klemgard	S. F. Shinkle	Thos. M. Mead
39		L. D. Luce	Anna R. Nichols	W. C. Marlon

* Term begins September 1, 1919.

COUNTY OFFICERS OF WASHINGTON—CONTINUED.

Counties	COUNTY COMMISSIONERS.			
	Coroner	District 1	District 2	District 3
1 Adams	D. A. Hewitt	Jacob Schoessler*	Chas. E. Moody	Walter J. Gray
2 Asotin	H. R. Merchant	C. Shumaker*	John K. McIntosh	O. E. Bailey
3 Benton	H. M. French	Francis Lee Bash	H. M. French	R. E. Pratt*
4 Chelan	A. Jay Templeton	E. F. Cadman	E. C. Long	Geo. W. Milham*
5 Clallam	W. J. Taylor	James Dick*	W. S. Miller	Theodore F. Rixon
6 Clarke	W. J. Knapp	M. E. Carson	Abel Miller	John P. Kiggins
7 Columbia	A. J. Knight	W. L. Dunlap	J. B. Blessinger	E. L. Lindsey
8 Cowlitz	W. G. Johnson	Fred M. Lane	Albert Maurer	Wm. L. Tansill
9 Douglas	J. W. Adams	H. L. Douglass*	Clint Weaver	J. H. Sanders
10 Ferry	Dr. C. F. Webb	Jas. M. Lynch	R. J. Hall	Geo. J. Taylor*
11 Franklin	Dr. H. B. O'Brien	D. C. W. Neff*	R. L. Olds	Marion Moore
12 Garfield	W. B. Brobst	C. H. Rommel*	Ed. Malone	G. J. Ruark
13 Grant	G. E. Chamberlain	H. W. Carolus	Donald Urquhart	E. I. Huffman
14 Grays Harbor	L. H. Berrey	J. B. Kirkaldie*	J. W. Young	E. S. Hubble
15 Island	Joseph Weeks	John M. LeSourd	John Frostad	O. N. Dock
16 Jefferson	C. C. Tiffin	C. I. Wanamaker*	E. G. Griffith	P. P. Bowman
17 King	F. R. Lewis	John Ryan*	E. T. Harris	Thomas Dobson
18 Kittitas	M. L. Bridgham	J. W. Groman*	Wm. Adam	J. F. Cartier
19 Klickitat	Merle W. Chapman	W. Scott Coe*	J. F. Duncan	J. F. B. Andrew
20 Klickitat	Wallace A. Smith, M. D.	R. R. Sommerville*	Ed. S. Orr	J. T. Blvin
21 Lewis	Julius T. Lyse	George N. Lowe*	J. E. Furgeson	Carl P. Louritzen
22 Lincoln	F. C. Willey	A. Hunter*	Wm. E. Daniels	J. A. Cole
23 Mason	Victor G. Grove	F. R. Hershberger*	Wm. Anderson	J. E. Mitchell
24 Okanogan	J. H. Henderson	J. A. Morehead*	H. E. Christianson	F. T. Stratton
25 Pacific	C. E. Bobo	Ira S. Troyer	R. H. Greenhalgh	R. B. Hall*
26 Pend Oreille	G. D. Shaver	Jas. R. O'Farrell*	T. H. Bellingham	J. W. Slayden
27 Pierce	Aaron Light	H. E. Wiley*	Nova Lancel	Norman P. Hodgson
28 San Juan	E. W. Scriven	E. A. Sisson*	I. Z. Nelson	Richard Thompson
29 Skagit	N. B. Challacombe	Moris Shields*	Jas. H. Harris	I. W. Shipley
30 Shoshone	W. M. Newman	C. H. Quidley*	John L. Bagley	I. C. Falconer
31 Spokane	J. C. Rigg	Charles R. Howard*	David T. Ham	W. H. McVay
32 Stevens	Jesse T. Mills	Henry Hughes	Chas. Hunt	James H. Newhouse
33 Thurston	G. F. Pierrot, M. D.	James C. Sams*	S. T. Bennett	M. J. Neylon
34 Wankarem	Geo. MacMartin	R. Ruuswell*	T. C. Eaton	J. E. Johnson
35 Walla Walla	N. Whitney Wear	A. C. Moore*	D. C. Baxter	F. J. Fingry
36 Whitman	L. L. Brunning	J. B. McMillan*	E. C. Saxton	Henry Slater
37 Yakima	H. R. Wells	W. E. Thompson*	J. F. Sanborn	P. M. Price
38		A. Lundstrum*	W. L. Dimmick	A. C. Turner

* Holdover

ABSTRACT OF VOTES

POLLED IN THE

STATE OF WASHINGTON

AT THE

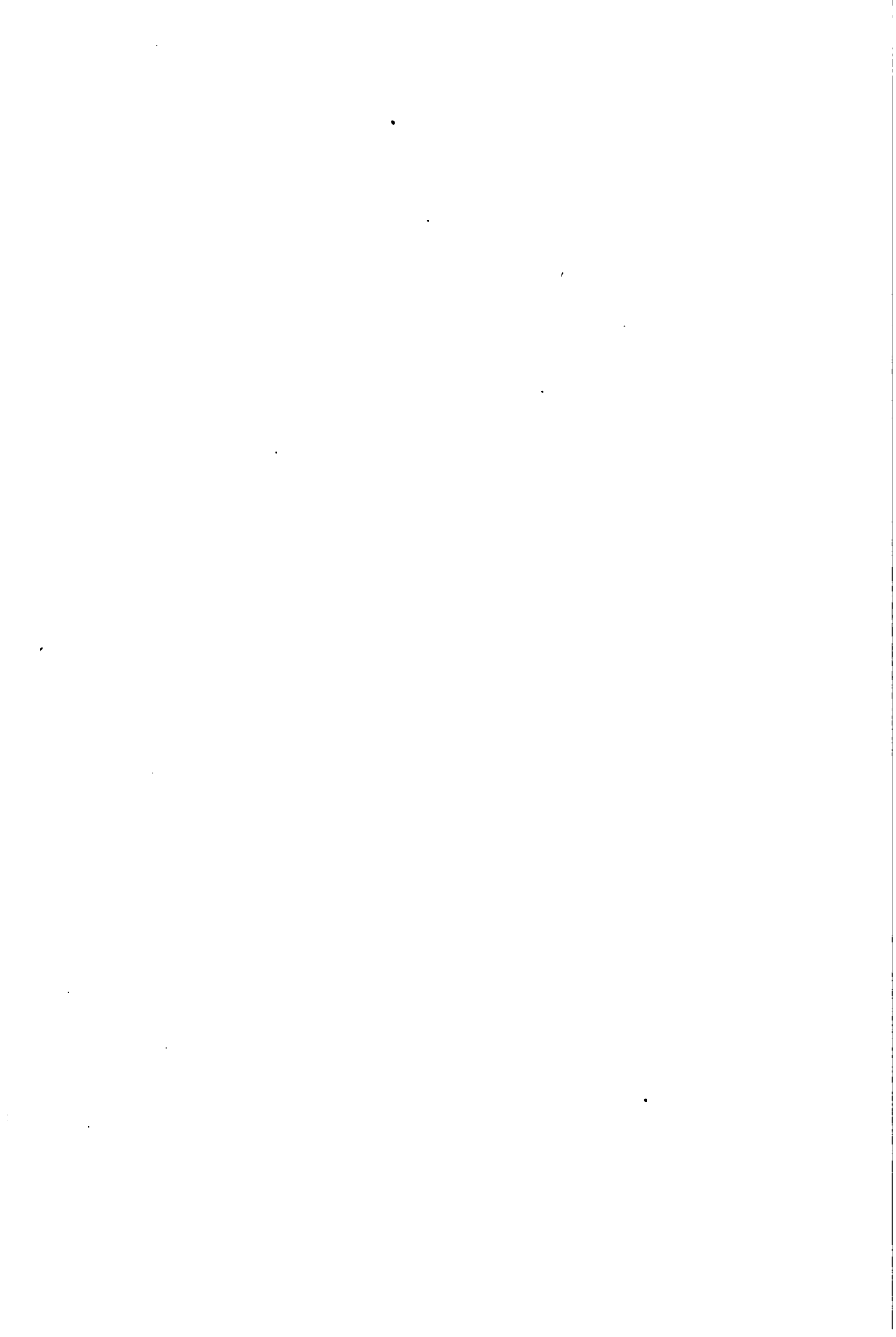
PRIMARY ELECTION

HELD

SEPTEMBER 10, 1919

FOR

**Representatives in Congress, Supreme Court Judges,
Joint Superior Court Judges, and State Senators
Whose Districts Comprise More Than
One County**



ABSTRACT OF VOTES, PRIMARY ELECTION 1918.

REPUBLICAN TICKET.

COUNTIES		Total Number of Votes (Ballots) Cast in Each Precinct	REPRESENTATIVE IN CONGRESS							
			First District		Second District			Third District		
			John F. Miller	Z. B. Rawson	Lindley H. Hadley	Joseph A. Sloan	W. H. Heaton	Scattering	Albert Johnson	J. O. Blair
1	Adams.....	330								1
2	Asotin.....	302								2
3	Benton.....	1,525								3
4	Chelan.....	2,165								4
5	Clallam.....	1,445								5
6	Clarke.....	3,261			797					6
7	Columbia.....	774							2,840	7
8	Cowlitz.....	2,158							1,780	8
9	Douglas.....	885								9
10	Ferry.....	194								10
11	Franklin.....	816								11
12	Garfield.....	832								12
13	Grant.....	1,154								13
14	Grays Harbor.....	8,184							2,582	14
15	Island.....	1,152			735					15
16	Jefferson.....	926			646					16
17	King.....	31,470	18,399	2,327	4,911					17
18	Kitsap.....	8,264	2,282	280						18
19	Kittitas.....	1,750								19
20	Klickitat.....	1,330								20
21	Lewis.....	2,948							2,113	21
22	Lincoln.....	1,053								22
23	Mason.....	402							819	23
24	Okanogan.....	1,074								24
25	Pacific.....	2,524							1,886	25
26	Pend Oreille.....	620								26
27	Pierce.....	18,254							10,818	27
28	San Juan.....	880			551					28
29	Skagit.....	5,630			3,959					29
30	Skamania.....	382							267	30
31	Snohomish.....	6,285			4,218	2		8		31
32	Spokane.....	12,800								32
33	Stevens.....	1,306							1,666	33
34	Thurston.....	2,429							302	34
35	Wahkiakum.....	342								35
36	Walla Walla.....	2,900								36
37	Whatecom.....	5,222			4,174	3	1			37
38	Whitman.....	2,518								38
39	Yakima.....	4,577								39
Totals.....		124,554	15,681	2,607	19,991	5	1	8	23,502	1

REPUBLICAN TICKET—Continued.

COUNTIES			REPRESENTATIVE IN CONGRESS										
			Third District		Fourth District					Fifth District			
			Theodore Hoss	Herman Hoss	John W. Summers	Austin Mires	William L. LaFollette	Ina Phillips Williams	W. E. McCroskey	J. Stanley Webster	Frank M. Goodwin	R. A. Hutchinson	C. O. Dill
1	Adams.....			160	46	92	21						1
2	Asotin.....			167	32	46	6	1					2
3	Benton.....			615	147	290	384						3
4	Chelan.....								1,255	457	175		4
5	Challam.....												5
6	Clarke.....												6
7	Columbia.....			449	70	121	30						7
8	Cowlitz.....	5	1										8
9	Douglas.....								255	59	27		9
10	Ferry.....								187	27	18		10
11	Franklin.....			152	15	98	21						11
12	Garfield.....			98	166	23	21						12
13	Grant.....			309	120	343	85						13
14	Grays Harbor.....												14
15	Island.....												15
16	Jefferson.....												16
17	King.....												17
18	Kitsap.....												18
19	Kittitas.....			239	1,148	172	180						19
20	Klickitat.....			341	311	429	73						20
21	Lewis.....												21
22	Lincoln.....								640	243	90		22
23	Mason.....												23
24	Okanogan.....								859	72	67	8	24
25	Pacific.....												25
26	Pend Oreille.....								404	85	45	36	26
27	Pierce.....												27
28	San Juan.....												28
29	Sragit.....												29
30	Skamania.....												30
31	Snohomish.....												31
32	Spokane.....								7,546	3,794	854		32
33	Stevens.....								850	200	113		33
34	Thurston.....												34
35	Wahkiakum.....												35
36	Walla Walla.....			1,879	504	417	100						36
37	Whatcom.....												37
38	Whitman.....			1,212	196	723	220						38
39	Yakima.....			1,211	1,066	531	1,581						39
Totals.....		5	1	6,830	3,820	3,285	2,672	1	11,946	4,942	1,839	8	

REPUBLICAN TICKET—Concluded.

COUNTIES		STATE SENATOR							
		Second District	Sixteenth District		Nineteenth District	Twenty-Fourth District			
		W. Lon Johnson	John O. Crawford	Avery R. Hayes	John W. Kleeb	P. L. Sinclair	Wm. Bishop	Victor J. Capron	E. E. (Pete) Fisher
1	Adams.....								1
2	Asotin.....								2
3	Benton.....								3
4	Chelan.....								4
5	Clallam.....						639	214	5
6	Clarke.....								6
7	Columbia.....								7
8	Cowlitz.....								8
9	Douglas.....								9
10	Ferry.....								10
11	Franklin.....								11
12	Garfield.....								12
13	Grant.....								13
14	Grays Harbor.....								14
15	Island.....								15
16	Jefferson.....						641	181	16
17	King.....								17
18	Kitsap.....								18
19	Kittitas.....		778	414					19
20	Klickitat.....								20
21	Lewis.....								21
22	Lincoln.....								22
23	Mason.....								23
24	Okanogan.....								24
25	Pacific.....				958	1,422			25
26	Pend Oreille.....	447							26
27	Pierce.....								27
28	San Juan.....						163	602	28
29	Stagit.....								29
30	Skamania.....		204	67					30
31	Snohomish.....								31
32	Spokane.....								32
33	Stevens.....	1,047							33
34	Thurston.....								34
35	Wahkiakum.....				133	178			35
36	Walla Walla.....								36
37	Whatcom.....								37
38	Whitman.....								38
39	Yakima.....								39
Totals.....		1,494	982	481	1,091	1,600	1,443	997	685

DEMOCRATIC TICKET.

COUNTIES		Total Number of Votes (Ballots) Cast in Each Precinct	REPRESENTATIVE IN CONGRESS							
			First District	Second District			Third District			
			J. M. Hawthorne	James Cleveland Longstreet	Joseph A. Sloan	Lindley H. Hadley	Theodore Hoss	Albert Johnson	A. F. Krohn	J. M. Loring
1	Adams.....	174								
2	Asotin.....	250								
3	Benton.....	136								
4	Chelan.....	447								
5	Challam.....	99		83	40					
6	Clarke.....	84					54	2	1	
7	Columbia.....	334								
8	Cowlitz.....	111					67	2		1
9	Douglas.....	640								
10	Ferry.....	533								
11	Franklin.....	135								
12	Garfield.....	110								
13	Grant.....	471								
14	Grays Harbor.....	297					171			
15	Island.....	78		23	85					
16	Jefferson.....	43		12	19					
17	King.....	5,063	2,481	255	462					
18	Kitsap.....	165	126							
19	Kittitas.....	234								
20	Klickitat.....	110								
21	Lewis.....	385					279			
22	Lincoln.....	735								
23	Mason.....	243					124			
24	Okanogan.....	1,226								
25	Pacific.....	47					35			
26	Pend Oreille.....	463								
27	Pierce.....	2,614					1,700			
28	San Juan.....	27		6	19					
29	Skagit.....	372		81	170					
30	Skamania.....	32					23			
31	Snohomish.....	389		127	242					
32	Spokane.....	5,483								
33	Stevens.....	927								
34	Thurston.....	97					60			
35	Wahkiakum.....	23					13			
36	Walla Walla.....	450								
37	Whatcom.....	370		108	144	8				
38	Whitman.....	1,003								
39	Yakima.....	376								
Totals.....		24,895	2,607	645	1,181	8	2,526	4	1	1

DEMOCRATIC TICKET—Continued.

COUNTIES		REPRESENTATIVE IN CONGRESS						STATE SENATOR	
		Fourth District				Fifth District		2nd Dist.	Sixteenth District
		Wm. E. McCroskey	John W. Summers	Ina Williams	William L. LaFollette	C. O. Dill	V. T. Tustin	C. R. McMillan	George F. Christensen John E. Chappell
1	Adams.....	141	4						1
2	Asotin.....	142		1					2
3	Benton.....	107	1	2					3
4	Chelan.....					274	158		4
5	Clallam.....								5
6	Clarke.....								6
7	Columbia.....	236							7
8	Cowlitz.....								8
9	Douglas.....					849	262		9
10	Ferry.....					846	172		10
11	Franklin.....	91							11
12	Garfield.....	91							12
13	Grant.....	306							13
14	Grays Harbor.....								14
15	Island.....								15
16	Jefferson.....								16
17	King.....								17
18	Kitsap.....								18
19	Kittitas.....	198							19
20	Klickitat.....	80	2		2			81	1
21	Lewis.....								21
22	Lincoln.....					354	359		22
23	Mason.....					840	427		23
24	Okanogan.....							320	24
25	Pacific.....								25
26	Pend Oreille.....					401	52		26
27	Pierce.....								27
28	San Juan.....								28
29	Skagit.....								29
30	Skamania.....							26	30
31	Snohomish.....								31
32	Spokane.....					8,106	2,280		32
33	Stevens.....					656	218	711	33
34	Thurston.....								34
35	Wahkiakum.....								35
36	Walla Walla.....	442							36
37	Whatcom.....								37
38	Whitman.....	781							38
39	Yakima.....	240		14	2				39
Totals.....		2,850	7	17	4	6,326	3,903	1,081	107

DEMOCRATIC TICKET—Concluded.

COUNTIES		STATE SENATOR									
		Sixteenth District (Con't'd)		Nineteenth District				Twenty-Fourth District			
		John C. Crawford	Avery Hayes	L. L. Darling	Edwin Connor	P. L. Sinclair	John W. Kleeb	J. L. Kuler	Wm. Bishop	Thos. S. Ambrose	E. E. (Pete) Fisher
1	Adams.....										1
2	Asotin.....										2
3	Benton.....										3
4	Chelan.....										4
5	Challam.....							3	1	1	5
6	Clarke.....										6
7	Columbia.....										7
8	Cowlitz.....										8
9	Douglas.....										9
10	Ferry.....										10
11	Franklin.....										11
12	Garfield.....										12
13	Grant.....										13
14	Grays Harbor.....										14
15	Island.....										15
16	Jefferson.....										16
17	King.....										17
18	Kitsap.....										18
19	Kittitas.....										19
20	Klickitat.....	2	1								20
21	Lewis.....										21
22	Lincoln.....										22
23	Mason.....										23
24	Okanogan.....										24
25	Pacific.....			4	1	3	4				25
26	Pend Oreille.....										26
27	Pierce.....										27
28	San Juan.....										28
29	Skagit.....										29
30	Skamania.....										30
31	Snohomish.....										31
32	Spokane.....										32
33	Stevens.....										33
34	Thurston.....										34
35	Wahkiakum.....										35
36	Walla Walla.....										36
37	Whatcom.....										37
38	Whitman.....										38
39	Yakima.....										39
Totals.....		2	1	4	1	3	4	3	1	1	1

NON-PARTISAN JUDICIARY TICKET.

COUNTIES		JUDGES OF THE SUPREME COURT									
		Six-Year Term									
		Total Number of Votes (Ballots) Cast in Each Precinct	Wallace Mount	John F. Main	John R. Mitchell	W. O. Chapman	Charles E. Claypool	William H. Pemberton	Edgar G. Mills	Frank Pierce	
1	Adams.....	487	248	192	176	120	91	83	164	77	1
2	Asotin.....	435	166	183	175	67	65	73	121	70	2
3	Benton.....	1,474	441	439	614	325	224	339	405	222	3
4	Chelan.....	2,552	713	872	935	587	571	606	639	461	4
5	Clallam.....	1,313	242	523	451	327	394	399	365	278	5
6	Clarke.....	3,153	726	673	961	722	663	719	966	662	6
7	Columbia.....	918	471	325	329	199	161	158	352	123	7
8	Cowlitz.....	2,207	504	533	672	453	564	613	559	420	8
9	Douglas.....	949	334	294	381	213	220	222	247	170	9
10	Ferry.....	716	192	145	223	157	207	177	179	116	10
11	Franklin.....	430	118	116	151	65	63	107	173	82	11
12	Garfield.....	1,042	262	243	255	40	37	58	106	50	12
13	Grant.....	1,433	374	359	592	276	303	257	390	276	13
14	Grays Harbor.....	3,241	778	1,147	1,309	913	989	718	779	455	14
15	Island.....	1,026	247	318	401	236	241	236	333	206	15
16	Jefferson.....	916	227	393	298	239	352	253	211	146	16
17	King.....	36,553	7,022	17,368	15,792	7,963	9,181	9,290	8,471	6,363	17
18	Kitsap.....	3,419	533	1,326	1,132	652	699	857	780	915	18
19	Kittitas.....	1,905	596	589	765	639	297	619	458	326	19
20	Klickitat.....	1,261	293	281	386	323	257	310	364	269	20
21	Lewis.....	3,012	776	706	1,358	1,027	895	796	760	519	21
22	Lincoln.....	1,680	809	461	731	322	302	365	533	300	22
23	Mason.....	621	185	243	463	146	198	108	133	71	23
24	Okanogan.....	1,634	677	469	720	515	491	621	622	344	24
25	Pacific.....	2,346	601	494	723	551	705	567	532	366	25
26	Pend Oreille.....	1,052	265	233	382	280	142	381	326	136	26
27	Pierce.....	14,799	3,135	4,755	6,192	11,464	4,103	4,160	3,312	2,079	27
28	San Juan.....	1,038	136	279	251	179	131	504	180	145	28
29	Skagit.....	5,350	1,233	1,573	1,739	1,033	692	2,064	1,497	1,217	29
30	Skamania.....	630	89	88	131	99	69	88	79	72	30
31	Snohomish.....	23,949	1,372	2,407	2,436	1,512	1,416	1,788	2,097	1,146	31
32	Spokane.....	17,477	6,225	4,872	7,673	3,232	3,232	4,260	5,111	3,262	32
33	Stevens.....	2,132	606	438	742	566	417	531	757	456	33
34	Thurston.....	2,543	1,303	1,245	1,942	501	543	322	363	199	34
35	Wahkiakum.....	350	74	85	119	95	94	127	103	73	35
36	Walla Walla.....	2,300	397	690	1,110	743	935	876	1,663	472	36
37	Whitcom.....	5,531	1,914	1,709	2,329	1,546	663	3,041	1,321	913	37
38	Whitman.....	3,351	1,246	837	1,232	743	525	818	1,140	725	38
39	Yakima.....	4,635	1,091	1,254	1,972	1,494	859	1,545	1,209	819	39
Totals.....		160,133	37,271	49,167	58,308	40,924	31,961	39,226	37,874	25,061	

NON-PARTISAN JUDICIARY TICKET—Continued.

COUNTIES		JUDGES OF THE SUPREME COURT (Concluded)									
		Six-Year Term (Concluded)			Four-Year Term		Two-Year Term				
		Kazis Kraucunas	F. W. Girand	Total No. of Votes (Bal- lots) Cast in Each Pre- dict for Six-Year Term	Kenneth Mackintosh	Total No. of Votes (Bal- lots) Cast in Each Pre- dict, Four Year Term	Warren W. Tolman	Walter M. French	Peter Husby	William Tierney	Total No. of Votes (Bal- lots) Cast in Each Pre- dict for Two-Year Term
1	Adams.....	39	55	498	343	346	214	173	.....	.....	386
2	Asotin.....	21	83	.....	239	.....	183	101	.....	.....	.....
3	Benton.....	82	132	.....	942	.....	536	521	.....	.....	.....
4	Chelan.....	116	259	866	1,623	1,301	1,264	662	.....	.....	1,287
5	Clallam.....	61	112	.....	864	.....	502	426	.....	.....	.....
6	Clarke.....	163	387	.....	1,724	1,724	695	1,363	.....	.....	2,060
7	Columbia.....	46	83	2,217	546	.....	341	288	.....	.....	.....
8	Cowlitz.....	154	232	.....	1,383	.....	759	753	.....	.....	.....
9	Douglas.....	54	119	.....	600	.....	441	281	.....	.....	.....
10	Ferry.....	89	102	593	368	368	256	239	.....	.....	486
11	Franklin.....	40	86	113	261	261	174	115	.....	.....	239
12	Garfield.....	10	23	391	326	326	109	216	.....	.....	325
13	Grant.....	126	143	1,066	735	735	573	310	.....	.....	856
14	Grays Harbor.....	113	303	2,730	2,108	2,109	1,063	1,254	.....	.....	2,317
15	Island.....	95	117	167	628	628	331	399	.....	.....	731
16	Jefferson.....	52	72	2,233	633	633	318	360	.....	.....	678
17	King.....	1,759	2,136	39,683	26,138	18,763	12,118	15,689	.....	.....	20,370
18	Kitsap.....	186	265	367	1,954	303	496	2,405	.....	.....	500
19	Kittitas.....	89	153	.....	1,143	.....	741	509	.....	.....	.....
20	Klickitat.....	69	129	518	703	703	297	503	.....	.....	800
21	Lewis.....	174	302	868	1,615	1,615	983	1,004	.....	.....	1,937
22	Lincoln.....	94	195	1,412	1,227	1,227	978	377	.....	.....	1,355
23	Mason.....	12	23	316	344	344	159	244	.....	.....	408
24	Okanogan.....	102	165	.....	1,412	.....	863	781	.....	.....	.....
25	Pacific.....	148	216	.....	1,238	.....	638	859	.....	.....	.....
26	Pend Oreille.....	75	153	2,332	623	623	422	317	.....	.....	739
27	Pierce.....	608	999	.....	9,614	.....	6,016	4,621	.....	.....	.....
28	San Juan.....	31	58	923	489	489	296	290	.....	.....	556
29	Skagit.....	313	437	.....	3,710	3,710	1,865	1,904	.....	.....	3,761
30	Skamania.....	25	40	322	225	225	106	166	.....	.....	272
31	Snohomish.....	340	534	15,073	4,247	4,247	2,465	2,159	2	3	4,629
32	Spokane.....	886	3,599	12,907	12,982	8,113	10,262	4,103	.....	.....	8,953
33	Stevens.....	193	326	.....	1,350	.....	1,069	509	.....	.....	.....
34	Thurston.....	97	108	2,510	1,498	1,498	920	752	.....	.....	1,672
35	Wahkiakum.....	24	42	314	249	249	141	127	.....	.....	268
36	Walla Walla.....	147	246	2,775	2,089	2,102	1,230	1,103	.....	.....	2,332
37	Whatcom.....	247	447	1,451	5,084	5,084	2,045	1,803	.....	.....	3,849
38	Whitman.....	183	436	.....	2,215	.....	1,499	976	.....	.....	.....
39	Yakima.....	189	337	.....	3,314	.....	1,862	1,624	.....	.....	.....
Totals.....		7,202	13,061	92,645	97,021	57,981	55,199	50,211	2	3	61,899

NON-PARTISAN JUDICIARY TICKET—Concluded.

COUNTIES		JUDGES OF THE SUPERIOR COURT					
		Ferry and Okanogan Counties				Mason and Thurston Counties	
		Charles H. Neal	P. D. Smith	Charles Johnson	Total No. of Votes (Ballots) Cast in Each Precinct for Superior Court Judge.	John M. Wilson	Total No. of Votes (Ballots) Cast in Each Precinct for Superior Court Judge.
1	Adams.....						1
2	Asotin.....						2
3	Benton.....						3
4	Chelan.....						4
5	Clallam.....						5
6	Clarke.....						6
7	Columbia.....						7
8	Cowlitz.....						8
9	Douglas.....						9
10	Ferry.....	535			535		10
11	Franklin.....						11
12	Garfield.....						12
13	Grant.....						13
14	Grays Harbor.....						14
15	Island.....						15
16	Jefferson.....						16
17	King.....						17
18	Kitsap.....						18
19	Kittitas.....						19
20	Klickitat.....						20
21	Lewis.....						21
22	Lincoln.....						22
23	Mason.....					419	419
24	Okanogan.....	1,677	2	1			24
25	Pacific.....						25
26	Pend Oreille.....						26
27	Pierce.....						27
28	San Juan.....						28
29	Skagit.....						29
30	Skamania.....						30
31	Snohomish.....						31
32	Spokane.....						32
33	Stevens.....						33
34	Thurston.....					1,827	1,827
35	Wahkiakum.....						35
36	Walla Walla.....						36
37	Whatcom.....						37
38	Whitman.....						38
39	Yakima.....						39
Totals.....		2,212	2	1	535	2,246	2,246

**The Name of Each Candidate, Number of Votes
Received by Each, and the Office Sought,
Is Found to Be as Follows.**

REPUBLICAN TICKET.

Representative in Congress—First District:

John F. Miller.....	15,681
Z. B. Rawson.....	2,607

Representative in Congress—Second District:

Lindley H. Hadley.....	19,991
Joseph A. Sloan.....	5
W. H. Heaton.....	1
Scattering	8

Representative in Congress—Third District:

Albert Johnson	23,502
J. O. Blair.....	1
Theodore Hoss	5
Herman Hoss	1

Representative in Congress—Fourth District:

John W. Summers.....	6,830
Austin Mires	3,820
William L. LaFollette.....	3,285
Ina Phillips Williams.....	2,672
W. E. McCroskey.....	1

Representative in Congress—Fifth District:

J. Stanley Webster.....	11,946
Frank M. Goodwin.....	4,942
R. A. Hutchinson.....	1,389
C. C. Dill.....	8

DEMOCRATIC TICKET.

Representative in Congress—Second District:

J. M. Hawthorne.....	2,607
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Representative in Congress—Second District:

James Cleveland Longstreet.....	645
Joseph A. Sloan.....	1,131
Lindley H. Hadley.....	8

Representative in Congress—Third District:

Theodore Hoss	2,526
Albert Johnson	4
A. F. Krohn	1
T. M. Loring.....	1

Representative in Congress—Fourth District:

Wm. E. McCroskey.....	2,850
John W. Summers.....	7
Ina Williams	17
William L. LaFollette.....	4

Representative in Congress—Fifth District:

C. C. Dill.....	6,326
V. T. Tustin.....	3,903

State Senators—Joint Senatorial District.

Second District—Stevens and Pend Oreille Counties:

Republican Ticket—

W. Lon Johnson.....	Stevens County	1,047	
	Pend Oreille County.....	447	1,494

Democratic Ticket—

C. R. McMillan.....	Stevens County.....	711	
	Pend Oreille County.....	320	1,031

Sixteenth District—Klickitat and Skamania Counties:

Republican Ticket—

John C. Crawford.....	Klickitat County.....	778	
	Skamania County.....	204	982

Avery R. Hayes.....	Klickitat County.....	414	
	Skamania County.....	67	481

Democratic Ticket—

George F. Christensen.....	Klickitat County.....	81	
	Skamania County.....	26	107

John E. Chappell.....	Klickitat County.....	1	1
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John C. Crawford.....	Klickitat County.....	2	2
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Avery Hayes.....	Klickitat County.....	1	1
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Nineteenth District—Pacific and Wahkiakum Counties:

Republican Ticket—

John W. Kleeb.....	Pacific County.....	958	
	Wahkiakum County.....	133	1,091

P. L. Sinclair.....	Pacific County.....	1,422	
	Wahkiakum County.....	178	1,600

Democratic Ticket—

L. L. Darling.....	Pacific County.....	4	4
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Edwin Connor.....	Pacific County.....	1	1
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P. L. Sinclair.....	Pacific County.....	3	3
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John W. Kleeb.....	Pacific County.....	4	4
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Twenty-fourth District—Clallam, Jefferson and San Juan Counties:

Republican Ticket—

Wm. Bishop.....	Clallam County.....	639	
	Jefferson County.....	641	
	San Juan County.....	163	1,443

Victor J. Capron.....	Clallam County	214	
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	Jefferson County	181	
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	San Juan County.....	602	997
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E. E. (Pete) Fisher.....	Clallam County.....	501	
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	Jefferson County.....	62	
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	San Juan County.....	72	635
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Democratic Ticket—

J. L. Kuler.....	Clallam County.....	3	3
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Wm. Bishop.....	Clallam County.....	1	1
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Thos. S. Ambrose.....	Clallam County.....	1	1
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— Bishop.....	Clallam County.....	1	1
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E. E. (Pete) Fisher.....	Clallam County.....	1	1
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NON-PARTISAN JUDICIARY TICKET.**Judges of the Supreme Court:****Six-Year Term—**

Wallace Mount.....	37,271
John F. Main.....	49,167
John R. Mitchell.....	58,308
W. O. Chapman.....	40,924
Charles E. Claypool.....	31,981
William H. Pemberton.....	39,226
Edgar G. Mills.....	37,874
Frank Pierce.....	25,061
Kazis Krauczunas.....	7,202
F. W. Girand.....	13,661

Four-Year Term—

Kenneth Mackintosh.....	97,021
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Two-Year Term—

Warren W. Tolman.....	55,199
Walter M. French.....	50,211
Peter Husby.....	2
William Tierney.....	3

Judges of the Superior Court—Joint Judicial Districts:**Ferry and Okanogan Counties—**

Charles H. Neal.....	Ferry County.....	535	
	Okanogan County.....	1,677	2,212
P. D. Smith.....	Okanogan County.....	2	2
Charles Johnson.....	Okanogan County.....	1	1

Mason and Thurston Counties—

John M. Wilson.....	Mason County.....	419	
	Thurston County.....	1,827	2,246

CERTIFICATION OF NOMINATIONS.

The Board having canvassed the returns of the several Congressional districts, find that the persons hereinafter named have received the greatest number of votes, and are entitled to the nomination for the respective offices as follows:

Republican Ticket

Representative in Congress, First District.....	John F. Miller
Representative in Congress, Second District.....	Lindley H. Hadley
Representative in Congress, Third District.....	Albert Johnson
Representative in Congress, Fourth District.....	John W. Summers
Representative in Congress, Fifth District.....	J. Stanley Webster

Democratic Ticket.

Representative in Congress, First District.....	J. W. Hawthorne
Representative in Congress, Second District.....	Joseph A. Sloan
Representative in Congress, Third District.....	Theodore Hoss
Representative in Congress, Fourth District.....	Wm. E. McCroskey
Representative in Congress, Fifth District.....	C. C. Dill

The Board having completed the canvass of the several joint Senatorial districts, declared the nominations in the several districts in favor of the candidates who received the highest number of votes in each of the said districts as follows:

Second District—Stevens and Pend Oreille Counties:

Republican Ticket.....W. Lon Johnson
Democratic Ticket.....C. R. McMillan

Sixteenth District—Klickitat and Skamania Counties:

Republican Ticket.....John C. Crawford
Democratic Ticket.....George F. Christensen

Nineteenth District—Pacific and Wahkiakum Counties:

Republican Ticket.....P. L. Sinclair
Democratic Ticket.....John W. Kleebs*

Twenty-fourth District—Clallam, Jefferson and San Juan Counties:

Republican Ticket.....Wm. Bishop
Democratic Ticket.....J. L. Kuler

The Board having canvassed the returns for Judges of the Supreme Court on the Non-Partisan Judicial Ticket finds that the following candidates have received the greatest number of votes cast for the respective judicial offices set opposite their names, and are entitled to appear on the ballot in the order named:

Judge of the Supreme Court, Six-Year Term,
(Three to be elected).....

{ John R. Mitchell
John F. Main
W. O. Chapman
William H. Pemberton
Edgar G. Mills
Wallace Mount

The Board further finds the following nominations to have been made, by a majority vote and entitled to places on the ballot without opposition:

Judge of the Supreme Court, Four-Year Term.....Kenneth Mackintosh
Judge of the Supreme Court, Two-Year Term.....Warren W. Tolman

The Board having canvassed the returns for the Non-Partisan Joint Judicial Districts, finds that the following candidates have been nominated by 50% or more of the total vote cast for the respective judicial offices set opposite their names, and that they are entitled to appear on the ballot without opposition:

Non-Partisan Joint Judicial Ticket.

Judge of the Superior Court, Ferry and Okanogan Counties:

(One to be elected).....Charles H. Neal

Judge of the Superior Court, Mason and Thurston Counties:

(One to be elected).....John M. Wilson

*For Joint State Senator on the Democratic Ticket in the 19th District, L. L. Darling and John W. Kleebs each received four votes, the same being the highest number of votes cast for any candidate on said ticket; the tie was immediately determined by the State Canvassing Board, then and there casting lots to determine the nominee. The lot resulted in the choice of John W. Kleebs, who was by said State Canvassing Board, declared the nominee for State Senator on the Democratic ticket in the 19th district, comprising the counties of Pacific and Wahkiakum.

IT IS FURTHER CERTIFIED That the foregoing pages numbered 25 to 37, inclusive, show the vote of each candidate of each political party for each office canvassed by said State Canvassing Board; also the vote of each candidate for the office of Supreme Court Judge of the State of Washington; also the vote of each candidate for the office of Superior Court Judge of the State of Washington in each of the Superior Court Judicial Districts extending beyond the limits of a single county wherein judges are to be elected; also the joint districts for the office of State Senator, comprising more than one county, and each of the pages above referred to have been initialed by the undersigned by way of permanent identification, and are the complete record and minutes of said canvass. There being no further business to come before the Board on motion the Board adjourned sine die.

IN WITNESS WHEREOF the undersigned as State Canvassing Board have hereunto set their hands this eleventh day of October, 1918.

(Signed) I. M. HOWELL,

Secretary of State.

W. W. SHERMAN,

State Treasurer.

C. W. CLAUSEN,

State Auditor.

ABSTRACT OF VOTES
POLLED IN THE
STATE OF WASHINGTON
AT THE
GENERAL ELECTION
HELD
NOVEMBER 5, 1918
FOR AND AGAINST
A Proposed Constitutional Convention and
Referendum Measure No. 10

ALSO FOR
Representatives in Congress, Supreme Court Judges,
State Senators and Representatives and Certain
Superior Court Judges Whose Districts
Comprise More Than One County

ABSTRACT OF VOTES, GENERAL ELECTION, 1918

COUNTIES		Total Number of Votes Cast in Each County	Constitutional Convention Proposed by the Legislature		Passed by the Legislature and Ordered Referred by Petition		REPRESENTATIVE IN CONGRESS			
							1st District			
			For Constitutional Convention	Against Constitu- tional Convention	For Referendum No. 10	Against Referendum No. 10	Rep. John F. Miller	Dem. J. M. Hawthorne	Soc. Hulet M. Wells	
1	Adams.....	1,297	223	407	545	324				1
2	Asotin.....	1,162	101	380	385	209				2
3	Benton.....	2,262	472	516	947	405				3
4	Chelan.....	3,195	653	756	1,315	467				4
5	Clallam.....	1,866	378	204	664	269				5
6	Clarke.....	4,418	910	807	1,617	797				6
7	Columbia.....	1,758	200	599	818	346				7
8	Cowlitz.....	3,212	493	1,047	1,298	833				8
9	Douglas.....	1,942	464	505	761	406				9
10	Ferry.....	1,126	251	190	302	233				10
11	Franklin.....	822	192	221	289	210				11
12	Garfield.....	874	127	255	416	169				12
13	Grant.....	1,985	515	523	813	419				13
14	Grays Harbor.....	5,337	958	1,864	2,411	1,202				14
15	Island.....	1,331	298	295	590	246				15
16	Jefferson.....	1,168	261	232	494	294				16
17	King.....	56,785	18,506	12,232	25,933	16,548	20,871	19,379	2,110	17
18	Kitsap.....	4,081	1,193	847	1,786	1,031	2,455	1,109	223	18
19	Kittitas.....	2,943	644	813	1,099	909				19
20	Klickitat.....	1,878	254	388	486	303				20
21	Lewis.....	5,061	966	1,545	2,280	1,046				21
22	Lincoln.....	2,761	469	726	1,186	533				22
23	Mason.....	1,044	157	403	398	286				23
24	Okanogan.....	3,136	674	550	1,082	573				24
25	Pacific.....	2,278	442	377	873	396				25
26	Pend Oreille.....	1,436	352	305	506	248				26
27	Pierce.....	21,391	6,576	8,519	11,355	6,981				27
28	San Juan.....	965	239	209	446	228				28
29	Skagit.....	6,014	1,425	1,550	2,953	1,433				29
30	Skamania.....	645	108	109	182	113				30
31	Snohomish.....	9,338	2,476	2,464	4,060	2,237				31
32	Spokane.....	26,133	6,384	7,976	11,302	6,958				32
33	Stevens.....	4,366	1,056	911	1,642	769				33
34	Thurston.....	3,778	731	1,346	1,647	858				34
35	Wahkiakum.....	481	79	107	142	115				35
36	Walla Walla.....	5,487	915	1,763	2,482	1,288				36
37	Whatecom.....	8,657	1,762	3,025	3,871	2,104				37
38	Whitman.....	6,723	1,039	2,319	3,334	1,480				38
39	Yakima.....	6,513	2,215	1,323	3,385	1,066				39
Totals.....		215,684	55,148	58,713	96,100	54,322	23,326	20,488	2,333	

COUNTIES		REPRESENTATIVE IN CONGRESS (Continued)									
		2nd District			3rd District			4th District			
		Rep.	Dem.	Soc.	Rep.	Dem.	Soc.	Rep.	Dem.	Soc.	
		Lindley H. Hadley	Joseph A. Sloan	James M. Salter	Albert Johnson	Theodore Ross	O. T. Clark	John W. Summers	Wm. E. McCroskey	Walter Price	Scattering
1	Adams.....							688	481	54	1
2	Asotin.....							598	464	12	2
3	Benton.....							1,190	848	52	3
4	Chelan.....										4
5	Clallam.....	843	660	62							5
6	Clarke.....				2,644	1,279	156				6
7	Columbia.....							977	688	15	7
8	Cowlitz.....				2,108	769	186				8
9	Douglas.....										9
10	Ferry.....										10
11	Franklin.....							338	409	35	11
12	Garfield.....							480	851	4	12
13	Grant.....							858	773	150	13
14	Grays Harbor.....				3,243	1,190	413				14
15	Island.....	659	497	88							15
16	Jefferson.....	704	837	24							16
17	King.....	4,387	4,771	855							17
18	Kitsap.....										18
19	Kittitas.....							1,496	975	123	19
20	Klickitat.....							1,015	626	75	20
21	Lewis.....				3,081	1,505	233				21
22	Lincoln.....										22
23	Mason.....				603	281	46				23
24	Okanogan.....										24
25	Pacific.....				1,510	537	53				25
26	Pend Oreille.....										26
27	Pierce.....				13,147	5,542	853				27
28	San Juan.....	520	812	23							28
29	Skagit.....	3,067	2,244	320							29
30	Skamania.....				335	195	23				30
31	Snohomish.....	4,755	3,381	635							31
32	Spokane.....										32
33	Stevens.....										33
34	Thurston.....				2,235	1,000	816				34
35	Wahkiakum.....				327	109	14				35
36	Walla Walla.....							2,742	2,479	52	36
37	Whatcom.....	4,872	2,857	538							37
38	Whitman.....							3,425	2,929	76	38
39	Yakima.....							3,654	2,312	123	39
	Totals.....	19,797	15,059	2,045	29,178	12,407	2,243	17,439	13,335	776	9

COUNTIES		REPRESENTATIVE IN CONGRESS (Concluded)			JUDGES OF THE SUPREME COURT						
		5th District			Six-Year Term						
		Rep.	Dem.	Soc.							
		J. Stanley Webster	O. C. Dill	Peter Harrison							
					John R. Mitchell	John F. Main	W. O. Chapman	William H. Pemberton	Edgar G. Mills	Wallace Mount	
1	Adams.....				745	662	212	135	257	666	1
2	Asotin.....				433	373	157	101	157	314	2
3	Benton.....				992	845	415	439	453	867	3
4	Chelan.....	1,939	1,121	31	1,281	1,232	511	436	464	1,063	4
5	Challam.....				760	708	338	352	274	467	5
6	Clarke.....				1,715	1,475	806	636	703	1,220	6
7	Columbia.....				913	881	155	162	264	1,080	7
8	Cowlitz.....				1,898	1,102	622	631	518	994	8
9	Douglas.....	984	891	19	754	695	351	252	323	639	9
10	Ferry.....	395	663	45	412	382	172	162	166	343	10
11	Franklin.....				387	320	142	186	184	813	11
12	Garfield.....				513	485	72	63	84	477	12
13	Grant.....				926	667	403	293	390	564	13
14	Grays Harbor.....				2,598	2,202	1,184	971	804	1,980	14
15	Island.....				592	452	307	297	244	325	15
16	Jefferson.....				640	617	249	213	188	495	16
17	King.....				29,940	23,540	14,742	14,274	9,073	14,661	17
18	Kitsap.....				1,871	1,736	925	1,097	696	964	18
19	Kittitas.....				1,476	1,149	827	638	436	1,002	19
20	Klickitat.....				754	605	443	326	300	496	20
21	Lewis.....				2,330	1,132	1,665	1,095	798	1,421	21
22	Lincoln.....	1,609	1,045	22	1,455	1,192	448	415	456	1,316	22
23	Mason.....				720	554	265	169	147	439	23
24	Okanogan.....	1,498	1,547	17	1,306	1,101	624	614	468	1,120	24
25	Pacific.....				1,234	736	737	751	351	597	25
26	Pend Oreille.....	555	845	7	621	490	288	282	234	439	26
27	Pierce.....				10,745	6,091	14,529	6,348	3,308	4,599	27
28	San Juan.....				438	386	172	434	121	327	28
29	Skagit.....				3,185	2,622	1,132	1,643	795	2,123	29
30	Skamania.....				217	167	173	136	92	140	30
31	Snohomish.....				5,150	4,349	2,299	1,996	1,541	3,264	31
32	Spokane.....	13,458	11,843	221	15,639	12,989	5,111	4,443	4,667	12,816	32
33	Stevens.....	1,988	2,106	111	1,849	1,602	1,015	766	717	1,272	33
34	Thurston.....				2,694	2,016	887	621	396	1,914	34
35	Wahkiakum.....				242	178	126	119	94	108	35
36	Walla Walla.....				2,816	2,458	1,184	1,418	956	2,742	36
37	Whatecom.....				4,982	3,914	2,125	3,560	1,356	3,600	37
38	Whitman.....				3,500	2,966	1,105	888	967	2,740	38
39	Yakima.....				3,214	2,535	1,356	1,392	1,203	2,635	39
Totals.....		22,426	20,061	473	111,387	88,058	58,359	48,648	34,658	72,447	

COUNTIES		JUDGES OF THE SUPREME COURT (Concluded)				JUDGES OF SUPERIOR COURT		STATE SENATOR	
		Four-Year Term		Two-Year Term		Ferry and Okanogan	Mason and Thurston	1st District	
								Rep.	Dem.
Kenneth Mackintosh	Scattering	Warren W. Tolman	Scattering	Charles H. Neal	John M. Wilson	W. A. Bollinger	John W. Hanna		
1	Adams.....	554	1	508	1				1
2	Asotin.....	408		329					2
3	Benton.....	836		741					3
4	Chelan.....	1,233		1,263					4
5	Clallam.....	700	1	637	1				5
6	Clarke.....	1,537		1,430					6
7	Columbia.....	722		647					7
8	Cowlitz.....	1,007		901					8
9	Douglas.....	762		758				711	1,120
10	Ferry.....	378		393		455		363	519
11	Franklin.....	364		335					
12	Garfield.....	438		423					
13	Grant.....	813		795				949	750
14	Grays Harbor.....	2,051		1,813					
15	Island.....	536		466					
16	Jefferson.....	620		553					
17	King.....	23,776		22,789					
18	Kitsap.....	1,965		1,665					
19	Kittitas.....	1,146		970					
20	Klickitat.....	566		466					
21	Lewis.....	1,964		1,835					
22	Lincoln.....	1,183		1,120					
23	Mason.....	498		423	1		457		
24	Okanogan.....	1,410		1,305		1,742		1,665	1,014
25	Pacific.....	813		741	1				
26	Pend Oreille.....	599		596					
27	Pierce.....	10,253		9,496					
28	San Juan.....	409		354					
29	Skagit.....	2,804		2,254					
30	Skamania.....	221		182					
31	Snohomish.....	4,114		3,662					
32	Spokane.....	13,314		12,549					
33	Stevens.....	1,800		1,844					
34	Thurston.....	1,905		1,727			2,025		
35	Wahkiakum.....	193		170					
36	Walla Walla.....	1,739		1,426					
37	Whatcom.....	4,580		4,356					
38	Whitman.....	2,405		2,262					
39	Yakima.....	2,696		2,372					
Totals.....		98,839	2	86,563	4	2,197	2,482	3,436	3,408

STATE SENATOR (Concluded)

COUNTIES		STATE SENATOR (Concluded)									
		2nd District		16th District		19th District			24th District		
		Rep.	Dem.	Rep.	Dem.	Rep.	Dem.		Rep.	Dem.	
		W. Lon Johnson	O. R. McMan	John C. Crawford	George F. Christensen	P. L. Sinclair	L. L. Darling	Scattering	Wm. Bishop	J. L. Keeler	
1	Adams.....										1
2	Asotin.....										2
3	Benton.....										3
4	Chelan.....										4
5	Clallam.....								864	684	5
6	Clarke.....										6
7	Columbia.....										7
8	Cowlitz.....										8
9	Douglas.....										9
10	Ferry.....										10
11	Franklin.....										11
12	Garfield.....										12
13	Grant.....										13
14	Grays Harbor.....										14
15	Island.....										15
16	Jefferson.....								781	312	16
17	King.....										17
18	Kitsap.....										18
19	Kittitas.....										19
20	Klickitat.....			1,088	596						20
21	Lewis.....										21
22	Lincoln.....										22
23	Mason.....										23
24	Okonagan.....										24
25	Pacific.....					1,729	9	27			25
26	Pend Oreille.....	661	603								26
27	Pierce.....										27
28	San Juan.....								371	497	28
29	Skagit.....										29
30	Skamania.....			208	371						30
31	Snohomish.....										31
32	Spokane.....										32
33	Stevens.....	2,122	1,843								33
34	Thurston.....										34
35	Wahkiakum.....					888					35
36	Walla Walla.....										36
37	Whatecom.....										37
38	Whitman.....										38
39	Yakima.....										39
Totals.....		2,783	2,446	1,291	967	2,062	9	27	2,006	1,493	

THE VOTE FOR AND AGAINST CONSTITUTIONAL CONVENTION, REFERENDUM MEASURE NO. 10, AND THE NAME OF EACH CANDIDATE, THE NUMBER OF VOTES RECEIVED BY EACH, AND THE OFFICE SOUGHT, ARE AS FOLLOWS:

Total number of votes cast in the state..... 215,684

CONSTITUTIONAL CONVENTION PROPOSED TO THE PEOPLE BY THE LEGISLATURE:

For Constitutional Convention..... 55,148
Against Constitutional Convention..... 58,713

PASSED BY THE LEGISLATURE AND ORDERED REFERRED BY PETITION:

For Referendum No. 10..... 96,100
Against Referendum No. 10..... 54,322

REPRESENTATIVE IN CONGRESS.

(First Congressional District.)

John F. Miller (Republican)..... 23,326
J. M. Hawthorne (Democrat)..... 20,483
Hulet M. Wells (Socialist)..... 2,332

(Second Congressional District.)

Lindley H. Hadley (Republican)..... 19,797
Joseph A. Sloan (Democrat)..... 15,059
James M. Salter (Socialist)..... 2,045

(Third Congressional District.)

Albert Johnson (Republican)..... 29,173
Theodore Hoss (Democrat)..... 12,407
O. T. Clark (Socialist)..... 2,242

(Fourth Congressional District.)

John W. Summers (Republican)..... 17,439
Wm. E. McCroskey (Democrat)..... 13,335
Walter Price (Socialist)..... 776
Scattering 9

(Fifth Congressional District.)

J. Stanley Webster (Republican)..... 22,428
C. C. Dill (Democrat)..... 20,061
Peter Harrison (Socialist) 473

JUDGES OF THE SUPREME COURT.

Six-Year Term.

John R. Mitchell..... 111,387
John F. Main..... 88,058
W. O. Chapman..... 58,359
William H. Pemberton..... 48,648
Edgar G. Mills..... 34,653
Wallace Mount..... 72,447

Four-Year Term.

Kenneth Mackintosh..... 98,339
Scattering 2

Two-Year Term.

Warren W. Tolman..... 86,563
Scattering 4

JUDGES OF THE SUPERIOR COURT.

Charles H. Neal:

Ferry County.....	455	
Okanogan County.....	1,742	
Total		2,197

John M. Willson:

Mason County.....	457	
Thurston County.....	2,025	
Total		2,482

Clay Allen:

King County.....	22,144	
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Crawford E. White:

King County.....	17,748	
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Calvin S. Hall:

King County.....	21,839	
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Thomas P. Revelle:

King County.....	7,723	
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STATE SENATOR.

First District.

W. A. Bolinger, Republican:

Douglas	711	
Ferry	363	
Grant	949	
Okanogan	1,665	
Total		3,488

John W. Hanna, Democrat:

Douglas	1,120	
Ferry	519	
Grant	750	
Okanogan	1,014	
Total		3,403

Second District.

W. Lon Johnson, Republican:

Stevens	2,122	
Pend Oreille.....	661	
Total		2,783

C. R. McMillan, Democrat:

Stevens	1,843	
Pend Oreille.....	603	
Total		2,446

Sixth District.

Guy B. Groff, Republican:

Spokane	1,702	
Total		1,702

Seventh District.

Edwin T. Coman, Republican:

Spokane	2,322	
Total		2,322

E. M. Denny, Democrat:

Spokane	1,130	
Total		1,130

Eighth District.

Oliver Hall, Republican:

Whitman	2,184	
Total		2,184

Ninth District.

W. C. McCoy, Republican:

Whitman	1,677	
Total		1,677

Thos. A. White, Democrat:

Whitman	1,359	
Total		1,359

Sixteenth District.

John C. Crawford, Republican:

Skamania	208	
Klickitat	1,083	
Total		1,291

George F. Christensen, Democrat:

Skamania	371	
Klickitat	586	
Total		957

Nineteenth District.

P. L. Sinclair, Republican:

Pacific	1,729	
Wahkiakum	333	
Total		2,062

L. L. Darling, Democrat:

Pacific	9	9
Scattering	27	27

Twenty-first District.

Fred W. Loomis, Republican:

Grays Harbor	2,281	
Total		2,281

W. C. Muncaw, Independent:

Grays Harbor.....	1,637	
Total		1,637

Twenty-fourth District.

Wm. Bishop, Republican:

Clallam	854	
Jefferson	781	
San Juan	271	
Total		2,006

J. L. Keeler, Democrat:

Clallam	684	
Jefferson	312	
San Juan	497	
Total		1,493

Twenty-fifth District.

E. J. Young, Republican:

Pierce	1,937	
Total		1,937

Fred J. Chamberlain, Democrat:

Pierce	1,760	
Total		1,760

Twenty-sixth District.

Ralph Metcalf, Republican:

Pierce	4,056	
Total		4,056

Twenty-ninth District.

A. V. Fawcett, Republican:

Pierce	3,618	
Total		3,618

Thirtieth District.

Howard D. Taylor, Republican:

King	2,165	
Total		2,165

Robert Bridges, Democrat:

King	2,042	
Total		2,042

Thirty-first District.

Ralph D. Nichols, Republican:

King	4,062	
Total		4,062

I. G. O'Harra, Democrat:

King	4,746	
Total		4,746

Wm. Cochrane:

King	549	
Total		549

Thirty-second District.

Daniel Landon, Republican:

King	7,475	
Total		7,475

C. J. Smith, Democrat:

King	6,373	
Total		6,373

Thirty-third District.

William Wray, Republican:

King	1,240	
Total		1,240

A. E. Flagg, Democrat:

King	1,160	
Total		1,160

Thirty-fourth District.

T. D. Rockwell, Republican:

King	757	
Total		757

Robert G. Canthorn, Democrat:

King	618	
Total		618

Thirty-fifth District.

Frank H. Renick, Republican:

King	1,078	
Total		1,078

M. W. Taylor, Democrat:

King	1,000	
Total		1,000

Thirty-sixth District.

Fred W. Hastings, Republican:

King	2,266	
Total		2,266

Joseph Wilson Range, Democrat:

King	1,820	
Total		1,820

Thirty-seventh District.

Geo. B. Lamping, Republican:

King	5,448	
Total		5,448

Thorwald Siegfried, Democrat:

King	3,650	
Total		3,650

Thirty-ninth District.

Magnus G. Thomle, Republican:

Snohomish	2,321	
Total		2,321

Fortieth District.

W. V. Wells, Republican:

Skagit	3,738	
Total		3,738

J. G. C. Auberg, Socialist:

Skagit	459	
Total		459

Forty-second District.

E. J. Cleary, Republican:

Whatcom	2,227	
Total		2,227

W. J. Hughes, Democrat:

Whatcom	1,585	
Total		1,585

Knute Evertz, Socialist:

Whatcom	355	
Total		355

STATE REPRESENTATIVES.

First District—Stevens County.

John Olson, Republican.....	1,865
Z. E. Hayden, Republican.....	1,683
Albert I. Kulzer, Democrat.....	2,033
Al. Weatherman, Democrat.....	1,373

Second District—Spokane County.

L. L. Westfall, Republican.....	4,579
Arthur L. True, Republican.....	4,562
D. E. Eddleman, Democrat.....	2,713
William G. Fairleigh, Democrat.....	2,759

Third District—Spokane County.

J. B. Gilbert, Republican.....	3,578
Albert A. Kelly, Republican	2,903
Chas. Cahill, Democrat.....	2,890
Jay C. Beal, Democrat.....	2,505

Fourth District—Spokane County.

A. R. Stratton, Republican.....	2,166
Olaf L. Olsen, Republican.....	2,206
J. W. Allender, Democrat.....	1,592
Stanley Hallett, Democrat.....	1,610

Fifth District—Spokane County.

John D. Bassett, Republican.....	1,626
Maurice Smith, Republican.....	1,636
Clarence G. Hubbard, Democrat.....	803

Sixth District—Spokane County.

John Anderson, Republican.....	2,397
Fred A. Adams, Republican.....	2,276
E. M. Cory, Democrat.....	1,262
Mrs. L. C. Kramer, Democrat.....	1,072

Seventh District—Whitman County.

Frank E. Sanger, Republican.....	1,928
Roy Jones, Republican.....	1,798
C. L. Wakefield, Democrat.....	1,186
J. S. Klemgard, Democrat.....	1,433

Eighth District—Whitman County.

D. F. Trimble, Republican.....	1,620
W. M. Anderson, Republican.....	1,719
John E. Trimble, Democrat.....	1,387
T. Vance Davis, Democrat.....	1,207

Ninth District—Asotin County.

E. J. Doyle, Republican.....	1
John L. Wormell, Democrat.....	658
J. C. Applewhite, Democrat.....	1
C. E. Wallace, Democrat.....	1

Tenth District—Garfield County.

John T. Ledgerwood, Democrat.....	508
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Eleventh District—Columbia County.

Harry F. Kennedy, Republican.....	979
Geo. Spalinger, Democrat.....	687

Twelfth District—Walla Walla County.

W. H. Kirkman, Republican.....	1,485
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Thirteenth District—Walla Walla County.

E. J. Cantonwine, Republican.....	1,866
N. B. Atkinson, Republican.....	1,668
Chas. W. Masterson, Democrat.....	1,288

Fourteenth District—Franklin County.

Logan L. Long, Republican.....	480
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Fifteenth District—Adams County.

J. L. Cross, Republican.....	899
A. B. Wiltse.....	1
J. L. Goodrich.....	3

Sixteenth District—Lincoln County.

F. B. Teter, Republican.....	1,508
W. O. Mansfield, Republican.....	1,283
E. L. Farnsworth, Democrat.....	1,178
J. C. Driscoll, Democrat.....	961

Seventeenth District—Okanogan County.

E. F. Banker, Democrat.....	1,524
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Eighteenth District—Douglas County.

E. W. Fawley, Republican.....	1,055
L. T. Griswold, Democrat.....	799

Nineteenth District—Kittitas County.

J. C. Hubbell, Republican.....	1,664
G. P. Short, Republican.....	1,785
S. R. Justham, Democrat.....	1,070

Twentieth District—Yakima County.

Wm. P. Sawyer, Republican.....	4,404
Howard C. Lucas, Republican.....	4,347
Lucy M. Cooper, Socialist.....	286
Scattering	162

Twenty-first District—Klickitat County.

John A. Miller, Republican.....	1,305
C. E. Brooks, Republican.....	3
C. Thompson, Republican.....	2

Twenty-second District—Skamania County.

Walter G. Hufford, Republican.....	364
A. C. Sly, Republican.....	1
Lillie Miller, Republican.....	4
James Rice, Republican.....	1
— Marble, Republican.....	1

Twenty-third District—Clarke County.

Geo. McCoy, Republican.....	2,364
C. W. Ryan, Republican.....	2,369
F. L. Russell, Democrat.....	1,443
W. S. Wood, Democrat.....	1,732

Twenty-fourth District—Cowlitz County.

Wm. H. Adams, Republican.....	1,934
R. H. Mitchell, Democrat.....	946

Twenty-fifth District—Wahkiakum County.

Joseph Girard, Republican.....	350
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Twenty-sixth District—Pacific County.

Fred B. Norman, Republican.....	1,704
F. A. Hart, Republican.....	21
J. W. Kleeb, Republican	4
L. L. Darling, Democrat	5
Scattering	5

Twenty-seventh District—Lewis County.

J. S. Siler, Republican.....	2,952
H. H. Swafford, Republican.....	2,971
H. W. Thompson, Republican.....	3,119
F. C. Edmisson, Democrat.....	1,526
C. P. Roundtree, Democrat.....	1,617

Twenty-eighth District—Thurston County.

C. C. Aspinwall, Republican.....	2,516
J. O. Marts, Republican.....	2,460
Royal F. King, Socialist.....	486
Alice E. Sheldon, Socialist.....	516

Twenty-ninth District—Grays Harbor County.

Phil S. Locke, Republican.....	2,175
H. B. Dollar, Republican.....	1,898

Thirtieth District—Grays Harbor County.

N. P. Nelson, Republican.....	1,018
John W. Burnett, Democrat.....	485

Thirty-first District—Mason County.

Mark E. Reed, Republican.....	740
Harry Ford, Republican.....	1
Mack Shelton, Republican.....	2
E. C. Leisure, Republican.....	2

Thirty-second District—Kitsap County.

J. Howard Shattuck, Republican.....	2,799
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Thirty-third District—Jefferson County.

Charles E. Coon, Republican.....	759
Herbert B. Gardner, Republican.....	813

Thirty-fourth District—Clallam County.

C. L. Babcock, Republican.....	983
Sandford C. Pose, Democrat.....	363
William J. Deloria, Labor.....	298

Thirty-fifth District—Pierce County.

Elmer E. Healey, Republican.....	2,060
Abe Morris, Republican.....	1,983
W. J. Langdon, Democrat.....	1,590
Frank Purse, Democrat.....	1,455

Thirty-sixth District—Pierce County.

Fred G. Remann, Republican.....	3,905
William C. Elliott, Republican.....	3,792
J. D. Riley, Democrat.....	1,523

Thirty-seventh District—Pierce County.

J. H. Davis, Republican.....	1,774
Fred A. Smith, Republican.....	1,770
W. H. Holloway, Democrat.....	863

Thirty-eighth District—Pierce County.

George W. Thompson, Republican.....	1,471
Frances M. Haskell, Republican.....	1,198
T. A. Yowell, Democrat.....	1,110

Thirty-ninth District—Pierce County.

Robert Gleason, Republican.....	3,426
Claude A. Young, Republican.....	2,946

Fortieth District—King County.

James T. Jones, Republican.....	2,254
Walter J. Lunn, Republican.....	2,266
Fred Mess, Republican.....	2,221
Fred Nelsen, Democrat.....	1,975
John Flemming, Democrat.....	1,879
Bennett O. Swain, Democrat.....	1,861
James Lund, Socialist.....	104

Forty-first District—King County.

Evan Thomas, Republican.....	4,266
H. P. Rude, Republican.....	3,858
Geo. W. Fritz, Democrat.....	3,966
Alfred E. Miller, Democrat.....	4,631
Mrs. Maude K. Cassidy, Socialist.....	627
Joe Payne, Socialist.....	563

Forty-second District—King County.

Frank E. Boyle, Republican.....	6,167
Henry J. Phillips, Republican.....	6,156
George N. Hodgdon, Democrat.....	6,742
H. C. Bohlke, Democrat.....	6,706
C. E. Kingery.....	619

Forty-third District—King County.

Pliny L. Allen, Republican.....	1,357
Frank G. Myers, Republican.....	1,269
Martin Wall, Democrat.....	1,123
George L. Palmer, Democrat.....	1,031
M. Baltrusis.....	151

Forty-fourth District—King County.

W. W. Conner, Republican.....	755
Frank H. Manogue, Republican.....	690
Chas. G. Helfner, Democrat.....	632
Frank A. Rust, Democrat.....	605

Forty-fifth District—King County.

Robert Grass, Republican.....	1,038
C. O. Qualheim, Republican.....	984
Harry Kilduff, Democrat.....	926
John C. Ince, Democrat.....	917
Aaron Fislserman.....	86
R. H. Smith.....	98

Forty-sixth District—King County.

Stephen A. Hull, Republican.....	2,230
Norman B. Abrams, Republican.....	2,113
Frank Cotterill, Democrat.....	2,133
Chas. D. Fullen, Democrat.....	1,746
Chas. C. Steele.....	200

Forty-seventh District—King County.

W. M. Pease, Republican.....	5,199
E. H. Gule, Republican.....	5,104
J. M. Wilson, Democrat.....	3,901
J. R. Manning, Democrat.....	3,695
Wm. F. Johnson.....	341

Forty-eighth District—Snohomish County.

S. Frank Spencer, Republican.....	3,393
Geo. W. Adamson, Republican.....	3,260
Chas. F. Manning, Democrat.....	1,606
John Ness	394

Forty-ninth District—Snohomish County.

C. W. Gorham, Republican.....	2,243
C. W. Anguish, Republican.....	2,014
W. H. Tierney, Democrat.....	1,347

Fiftieth District—Island County.

James Zylstra, Republican.....	659
Nils Anderson, Democrat.....	604

Fifty-first District—Skagit County.

J. M. Shields, Republican.....	3,761
Fred B. Fulton, Republican.....	3,754
J. M. Harrison, Republican.....	3,580
W. A. Lowman, Democrat.....	2,084
W. E. Elbe, Socialist.....	432
Gus Dobers, Socialist	400
Emma Sager, Socialist.....	434

Fifty-second District—San Juan County.

E. H. Nash, Republican.....	757
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(Fifty-third District—Whatcom County.)

Tom Brown, Republican.....	2,087
C. H. Hoff, Republican.....	2,184
Will A. Pike, Democrat.....	1,291
Paul Wolten, Democrat.....	125
W. C. Byrum, Socialist.....	340
Milton Johnson, Socialist.....	485

Fifty-fourth District—Whatcom County.

Chas. I. Roth, Republican.....	2,504
David F. Trunkey, Republican.....	2,695
James E. Dyke, Democrat.....	1,583
Emil Hoof, Democrat.....	527

Fifty-fifth District—Ferry County.

A. L. Bradley, Republican.....	857
R. R. Coleman, Democrat.....	567
Lewis P. Summers, Socialist.....	100

Fifty-sixth District—Chelan County.

John A. Gellatly, Republican.....	1,907
S. O. Pool, Democrat.....	1,074

Fifty-eighth District—Benton County.

Gordon C. Moores, Republican.....	1,149
Lee Furgeson, Democrat.....	970

Fifty-ninth District—Grant County.

H. D. McMillen, Republican.....	965
John Urquhart, Democrat.....	908

Sixtieth District—Pend Oreille County.

Fred L. Wolf, Republican.....	797
C. C. Thompson, Democrat.....	569

STATE OF WASHINGTON

Minutes and Official Proceedings

OF THE

State Board of Equalization

SESSION OF 1917

PROCEEDINGS

OF THE

STATE BOARD OF EQUALIZATION

Session of 1917

OLYMPIA, WASHINGTON, TUESDAY, September 4, 1917.

Pursuant to the provisions of the law relative to the organization and proceedings of the State Board of Equalization for the equalization of assessments, the Board met in the Senate Chamber on the 4th day of September, 1917, the following named persons designated by law as members of such Board being present: C. W. Clausen, State Auditor, and Chairman *ex-officio*; Clark V. Savidge, Commissioner of Public Lands, and Clark R. Jackson, State Tax Commissioner, and Secretary *ex-officio*.

On motion of Mr. Jackson, Mr. E. A. Voris was elected clerk of the Board at a salary of \$6.00 per day.

The following program for hearings before the Board was adopted:

- September 4: Electric railways and small steam roads.
- September 5: Steam railways.
- September 6: Eastern Washington counties.
- September 7: Western Washington counties.

Mr. F. P. Dexter appeared before the Board on behalf of the following roads:

- Everett Railway, Light & Water Company,
- Pacific Northwest Traction Company,
- Pacific Traction Company,
- Tacoma Railway & Power Company,
- Puget Sound Electric Company,
- Puget Sound Traction, Light & Power Company,
- Western Washington Power Company.

Mr. Ira Bronson, representative of the Port Townsend Southern Railroad Company, was present and stated that he did not desire to be heard if no change in the assessment of his company was contemplated.

Mr. B. S. Grosscup, attorney for The Pullman Company, was present, and upon being informed that no increase in the assessment of this road could be made without due notice, stated that no hearing was desired.

Mr. W. H. Galvani, representative of the Walla Walla Valley Railway Company, was given a hearing on behalf of said road; also Mr. A. F. S. Steele on behalf of the Washington Water Power Company; Mr. F. Greene on behalf of the Pacific Coast Railroad Company; Mr. J. O. Whitmarsh, Manager, on behalf of the Puget Sound & Baker River Railway Company; Mr. W. T. Beck, Manager, on behalf of the Spokane & British Columbia Railway Company and Mr. G. B. Moore, Secretary and General Manager, on behalf of the Washington Western Railway Company.

Board adjourned to meet Wednesday, September 5, 1917, at 10:30 a. m.

as hereinafter appended and are hereby made a part of the proceedings of this Board.

Adjournment was taken until 9:30 a. m., Wednesday, September 19th.

WEDNESDAY, September 19, 1917.

The Board convened at 9:30 a. m., pursuant to adjournment, all members being present, and Chairman Clausen presiding.

The minutes of the previous meeting were read, discussed and approved.

There being no further business to come before the Board, on motion, the Board adjourned *sine die*.

C. W. CLAUSEN,

State Auditor and ex-officio Chairman of the Board;

CLARK V. SAVIDGE,

Commissioner of Public Lands;

CLARK R. JACKSON,

State Tax Commissioner and ex-officio Secretary of the Board.

SCHEDULES

SCHEDULE "A"—Table I.—Abstract of Assessment of Personal Property in the State of Washington, as Returned by the County Boards for the Year 1917.

COUNTIES	L—HORSES											
	ONE YEAR OLD			TWO YEARS OLD			THREE YEARS OLD AND OVER			STALLIONS		
	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value
Adams	1,480	\$20,560	\$13.89	1,351	\$32,800	\$24.09	1,082	\$37,395	\$35.03	9,059	\$467,575	\$51.62
Asotin	564	10,555	18.72	449	12,350	24.75	1,719	88,870	51.34	56	9,535	\$114.91
Benton	587	6,185	11.42	460	8,045	17.16	1,719	88,870	51.34	29	4,225	162.50
Chelan	906	9,906	10.85	254	4,970	19.17	1,014	20,425	25.68	15	1,540	99.84
Clallam	171	2,448	14.33	217	4,075	20.62	1,014	15,928	28.15	7	1,000	136.47
Clark	171	2,448	14.33	217	4,075	20.62	1,014	15,928	28.15	6	965	160.43
Columbia	767	7,185	9.43	678	10,238	15.21	1,152	26,425	23.55	14	3,965	139.43
Cowlitz	189	1,677	8.87	172	2,541	14.77	807	5,769	13.89	38	4,115	94.39
Douglas	1,755	21,599	13.09	1,529	45,852	18.14	1,822	48,768	25.87	9,469	396,403	41.70
Ferry	350	5,244	14.88	362	8,678	21.88	1,014	32,514	32.06	62	11,182	212.50
Franklin	895	6,657	12.45	876	10,123	19.79	1,074	28,155	26.21	2,189	151,262	42.68
Grant	871	10,826	12.43	855	16,122	18.86	1,086	30,700	29.16	3,473	188,262	44.13
Grays Harbor	1,423	20,980	14.76	1,721	37,673	21.88	949	32,685	34.47	6,959	297,587	42.77
Island	169	2,997	17.66	194	5,400	27.83	527	10,653	35.85	1,454	69,730	47.95
Jefferson	48	788	16.51	88	742	22.89	255	5,417	21.26	1,576	53,438	40.77
Knap	19	353	17.54	30	840	24.73	50	889	10.78	1	300	87.50
Klickitat	516	10,620	20.57	545	16,460	30.14	3,451	184,000	59.03	8,845	599,700	66.34
Klickitat	19	180	9.42	57	587	22.71	1,572	9,582	19.72	237	11,912	41.51
Klickitat	1,055	13,738	13.42	907	20,665	22.71	2,219	48,771	29.40	2,695	161,213	61.42
Klickitat	764	9,435	12.45	609	10,460	18.82	1,571	17,454	30.87	3,894	141,265	50.02
Lincoln	597	8,800	19.09	524	8,169	24.43	1,871	70,722	40.86	3,894	167,177	49.46
Lincoln	5,717	51,717	17.09	2,170	62,042	24.43	1,871	70,722	40.86	14,738	735,977	54.03
Mason	60	1,465	10.41	59	1,827	14.91	1,583	6,875	22.89	7,046	25,812	36.96
Okanogan	1,765	12,385	7.03	1,846	27,463	14.86	3,590	81,565	22.72	7,046	25,812	36.96
Pacific	146	1,367	12.76	60	1,023	20.35	117	2,768	23.18	1,589	56,205	42.79
Pend Oreille	113	1,445	12.81	82	5,870	27.84	1,011	4,277	25.87	1,449	158,390	62.82
Pierce	177	3,063	20.36	211	5,875	27.84	3,849	185,865	30.81	2,549	158,390	62.82
San Juan	62	1,283	22.90	68	1,860	30.66	3,049	15,687	20.81	2,474	57,650	38.19
Skiag	141	1,560	13.12	232	4,190	21.42	601	15,680	25.89	2,474	57,650	38.19
Skamania	8	65	8.67	7	95	13.87	10	178	17.80	1,082	32,825	24.94
Spokane	172	2,780	19.87	230	5,870	23.34	1,049	33,810	31.15	2,862	128,625	43.19
Spokane	172	16,170	15.06	1,094	27,060	24.75	1,251	47,010	36.99	9,915	513,010	50.54
Stevens	841	7,570	9.00	987	12,420	14.82	1,613	27,065	16.77	5,266	113,068	39.61
Thurston	232	3,700	15.93	142	3,461	24.30	1,413	10,968	29.54	1,082	66,876	39.61
Walla Walla	5	90	18.00	7	150	21.43	12	255	19.88	276	9,082	32.40
Whitman	944	14,317	15.17	868	19,308	21.39	1,806	46,590	25.78	7,661	367,070	44.02
Yakima	231	3,083	13.15	259	6,013	19.45	9,084	9,084	16.46	8,208	109,072	34.02
Yakima	2,894	73,405	25.88	3,017	121,610	40.81	1,648	82,940	80.15	20,940	1,111,105	88.03
Yakima	1,787	30,210	11.68	8,069	127,460	22.06	3,008	105,735	35.15	7,940	287,331	88.03
Totals	25,410	\$573,923	\$14.89	27,151	\$625,690	\$23.04	44,101	\$1,138,008	\$25.80	1,008	\$47,810	\$47.81

Schedule "A"—Table I.—Continued.

COUNTIES	3			YEARLINGS			3.—STOCK CATTLE			4					
	MULES AND ASSES						TWO YEARS OLD			THREE YEARS OLD AND OVER			MILCH COWS		
	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value
1 Adams	1,684	\$94,970	\$56.39	2,432	\$85,026	\$30.70	1,689	\$31,230	\$18.55	2,286	\$52,980	\$23.60	2,352	\$93,620	\$39.79
2 Asotin	146	6,200	42.47	2,154	82,295	15.00	1,683	32,480	20.75	2,300	56,350	24.50	2,844	95,335	30.02
3 Benton	181	4,565	35.08	1,760	13,880	7.85	1,080	16,380	14.81	479	9,855	20.58	2,855	54,150	23.01
4 Chelan	232	15,342	66.33	909	7,687	8.42	702	11,358	16.23	403	8,295	20.58	1,807	45,089	23.50
5 Okanogan	21	615	29.29	1,843	9,521	7.09	1,109	14,022	12.71	484	7,734	15.98	3,387	74,497	22.62
6 Clark	119	4,680	39.32	3,798	21,270	5.83	2,615	25,545	9.74	484	6,463	13.35	1,369	189,680	13.68
7 Columbia	1,584	70,787	44.15	1,981	16,708	8.38	1,307	18,378	14.05	1,840	24,730	13.82	1,940	25,485	20.56
8 Cowlitz	1,208	51,165	42.36	2,487	18,824	7.75	1,589	11,692	7.39	911	8,770	9.63	4,173	56,783	13.58
9 Douglas	1,208	51,165	42.36	2,487	18,824	7.75	1,589	11,692	7.39	911	8,770	9.63	4,173	56,783	13.58
10 Ferry	116	4,807	41.95	1,857	25,000	13.06	1,327	27,437	20.87	685	9,844	14.80	3,447	64,702	18.77
11 Franklin	849	42,068	49.65	3,086	33,063	11.12	1,465	27,182	18.50	2,984	50,573	22.62	479	19,746	33.96
12 Garfield	464	19,822	42.68	2,491	25,062	10.07	1,924	27,352	14.22	5,712	71,368	12.36	883	13,175	33.96
13 Grant	563	27,300	48.65	2,855	30,630	12.39	3,134	61,013	19.46	1,855	83,783	19.20	762	15,008	29.35
14 Grays Harbor	18	385	21.39	1,948	15,277	7.84	1,467	17,323	11.81	1,389	15,452	10.15	2,674	95,808	24.18
15 Island	9	230	25.55	613	3,979	6.48	581	5,102	9.51	1,389	15,452	10.15	2,001	35,900	17.50
16 Jefferson	13	270	20.77	517	3,979	7.70	822	3,770	11.70	230	3,647	15.89	1,689	45,045	26.67
17 King	457	22,980	50.26	3,913	42,060	10.75	2,662	54,040	20.82	2,254	44,080	19.55	23,064	758,840	82.88
18 Kitsap	7	180	18.57	580	3,950	7.45	239	2,873	10.43	1,827	6,713	16.95	1,890	41,291	22.20
19 Kittitas	85	5,490	64.59	5,144	51,005	9.92	3,812	61,485	17.51	3,387	67,080	19.97	3,905	118,875	30.21
20 Klickitat	287	11,134	38.79	3,890	33,193	8.98	2,895	35,897	15.04	2,641	85,717	31.48	2,517	929,880	36.46
21 Lewis	82	3,382	40.62	6,195	53,923	9.51	3,409	51,409	15.08	701	12,405	17.70	11,823	289,880	25.46
22 Lincoln	2,008	119,205	59.82	4,513	56,622	12.54	3,105	47,493	15.29	2,716	54,040	19.40	4,008	95,808	24.18
23 Mason	386	12,135	36.12	9,624	122,609	12.75	5,403	123,393	22.81	7,728	179,535	23.23	4,897	35,900	17.50
24 Okanogan	25	25	1.00	1,005	6,537	5.22	893	3,895	10.00	969	17,988	17.96	2,162	45,045	26.67
25 Pacific	12	25	1.00	1,005	6,537	5.22	893	3,895	10.00	969	17,988	17.96	2,162	45,045	26.67
26 Pend Oreille	15	413	27.53	894	6,780	7.82	568	7,533	12.75	226	3,855	17.06	1,151	24,793	21.43
27 Pierce	106	6,323	60.26	2,154	23,531	13.25	1,003	34,491	20.74	226	3,855	17.06	11,450	380,921	33.25
28 San Juan	4	110	27.50	687	4,725	7.41	440	5,417	12.81	230	3,840	16.68	1,677	149,160	16.81
29 Skagit	8	250	31.25	3,230	16,490	5.10	2,751	27,185	9.88	3,151	50,520	16.02	8,570	38,540	20.00
30 Skamania	13	250	19.23	236	2,848	9.97	167	2,475	14.82	42	785	17.50	650	11,080	19.98
31 Snohomish	30	1,858	45.16	4,525	30,130	6.66	3,405	42,359	12.44	1,015	15,675	15.44	14,304	890,505	35.80
32 Spokane	422	21,940	51.99	4,195	34,180	12.92	2,893	43,555	17.14	1,479	32,555	24.04	8,500	392,780	30.70
33 Stevens	217	6,008	30.33	5,078	38,165	6.97	3,291	59,585	11.40	2,587	46,593	16.41	6,146	128,548	20.07
34 Thurston	33	668	21.15	3,078	19,915	6.47	1,532	16,938	11.31	1,069	17,937	16.21	6,538	107,418	16.39
35 Wahkiakum	.....	.....	.....	538	.....	.....	440	.....	.....	76	1,140	15.00	1,509	38,180	20.30
36 Walla Walla	3,552	202,077	56.41	2,470	23,679	9.67	2,273	35,570	15.65	2,480	49,127	19.73	2,600	88,180	20.32
37 Whitman	43	1,224	28.47	4,158	23,023	5.26	2,732	31,533	9.85	2,481	30,559	12.53	10,877	219,019	20.13
38 Yakima	2,243	190,905	87.92	6,944	60,480	10.01	4,123	82,055	20.10	5,532	167,593	29.97	6,532	229,213	34.98
39	827	19,880	59.60	13,305	123,235	9.26	7,301	138,165	18.85	5,199	121,570	23.33	11,554	347,825	30.10
Totals	17,516	\$904,325	\$51.63	117,235	\$1,006,236	\$9.34	79,142	\$1,231,340	\$15.50	67,677	\$1,419,920	\$20.98	190,851	\$4,883,143	\$25.55

Schedule "A"—Table I.—Continued.

COUNTIES	BULLS FOR BREED- ING PURPOSES			STOCK SHEEP AND GOATS			SHEEP BUCKS For Breeding Purposes			HOGS			POUL- TRY			DRAVS, TRECHES, WAGONS AND SLEIGHS		
	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value
1 Adams	122	\$9,815	\$27 17	15,551	\$90,680	\$5 90	304	\$1,225	\$4 02	5,181	\$20,770	\$3 99	1,892	\$9,485	\$3 99	1,892	\$22,985	\$12 15
2 Asotin	112	3,710	33 13	11,190	47,533	4 25	55	445	\$4 02	2,784	11,948	4 29	3,692	3,692	4 29	3,692	12,940	32 94
3 Benton	69	2,800	39 23	65,730	246,610	3 75	62	475	7 06	1,810	9,900	6 99	6,460	6,460	6 99	6,460	12,190	10 45
4 Chelan	57	1,768	31 02	7,444	1,941	2 61	404	1,295	3 20	3,943	6,900	7 83	1,508	3,943	7 83	1,508	21,795	14 46
5 Okanogan	123	2,688	21 89	891	2,775	3 11	14	55	3 93	3,989	4,246	4 62	3,989	3,989	4 62	3,989	7,818	14 78
6 Clarke	832	5,405	15 36	2,990	4,810	1 45	182	133	2 55	2,389	10,543	6 98	1,764	2,389	6 98	1,764	18,305	10 46
7 Columbia	110	2,818	23 62	15,968	40,012	2 50	197	790	4 84	1,540	3,894	3 64	1,764	3,894	3 64	1,764	13,885	14 06
8 Cowlitz	180	2,954	16 41	1,081	1,908	1 79	14	25	1 79	894	3,894	4 01	1,764	3,894	4 01	1,764	13,885	14 06
9 Douglas	673	1,898	27 65	5,573	2,040	3 64	75	300	4 00	4,989	20,080	4 01	1,764	3,894	4 01	1,764	13,885	14 06
10 Ferry	81	2,945	36 35	849	1,258	8 64	12	42	3 80	4,989	20,080	4 01	1,764	3,894	4 01	1,764	13,885	14 06
11 Franklin	16	568	39 88	31,438	125,988	4 00	90	670	7 04	1,236	6,411	5 71	2,381	6,411	5 71	2,381	11,185	15 23
12 Garfield	127	3,628	20 69	21,574	1,574	1 84	95	380	4 00	4,490	13,546	3 01	2,768	13,546	3 01	2,768	7,624	10 72
13 Grant	125	3,827	29 61	41,293	150,897	3 65	97	488	4 97	3,265	13,882	4 22	1,065	13,882	4 22	1,065	14,816	13 91
14 Grays Harbor	179	4,027	22 50	1,050	2,073	1 97	8	42	5 25	1,497	6,773	4 62	6,352	6,352	4 62	6,352	20,462	13 61
15 Island	43	680	14 65	1,424	3,890	2 36	4	13	3 25	357	2,455	6 89	7,310	7,310	6 89	7,310	14,063	17 61
16 Jefferson	77	2,595	33 70	253	686	2 36	5	15	3 00	329	2,225	9 81	1,698	2,225	9 81	1,698	2,872	9 43
17 King	711	35,610	50 09	1,756	8,110	4 62	721	4,940	6 80	4,350	30,100	6 82	6,413	30,100	6 82	6,413	259,430	35 79
18 Knap	41	1,046	25 51	201	529	2 62	6	13	3 00	600	1,920	3 20	13,299	13,299	3 20	13,299	5,062	8 91
19 Kittitas	232	8,315	33 00	41,881	192,730	4 61	270	2,165	9 02	2,744	13,400	4 88	1,797	13,400	4 88	1,797	31,770	17 68
20 Klickitat	209	6,483	30 80	45,649	207,877	4 54	277	2,088	7 47	6,817	23,821	4 18	7,470	23,821	4 18	7,470	19,873	14 44
21 Lewis	320	7,924	24 75	2,139	7,943	3 71	4	21	5 25	8,615	15,980	4 35	20,430	20,430	4 35	20,430	25,949	14 77
22 Lincoln	184	5,867	18 83	1,997	5,830	2 63	85	227	2 87	5,815	13,105	3 41	5,865	5,865	3 41	5,865	68,467	16 55
23 Mason	42	738	13 64	203	334	1 62	1	2	2 00	8,910	20,579	4 69	3,513	20,579	4 69	3,513	2,438	9 70
24 Okanogan	640	21,888	40 43	5,532	19,455	3 54	105	683	6 39	8,504	20,253	5 90	2,068	20,253	5 90	2,068	46,079	13 82
25 Pacific	130	2,202	19 94	1,130	180	1 56	1	5	5 00	392	1,290	5 02	2,132	1,290	5 02	2,132	10,457	13 12
26 Pend Oreille	59	1,245	21 10	334	187	2 32	1	1,432	7 00	3,044	17,301	6 55	42,120	42,120	6 55	42,120	10,457	13 12
27 Pierce	237	8,292	32 13	1,382	6,430	4 62	199	6	13	3 00	2,886	8 79	5,000	5,000	8 79	5,000	42,803	22 84
28 San Juan	61	1,223	20 12	5,712	13,080	2 50	6	55	1 41	622	1,380	3 82	1,863	1,380	3 82	1,863	13,287	11 77
29 Shaght	932	5,580	14 35	383	1,600	1 64	39	1	1	1	1	1	1	1	1	1	1	1
30 Shumish	84	800	10 25	91	710	2 31	1	1	1	1	1	1	1	1	1	1	1	1
31 Skutumpah	562	12,125	22 37	292	745	2 84	39	165	4 23	1,403	29,705	6 08	19,850	19,850	6 08	19,850	25,620	13 40
32 Spokane	363	7,860	16 07	1,623	5,560	3 42	610	2,005	4 01	6,000	29,705	4 95	83,010	83,010	4 95	83,010	5,254	16 01
33 Stevens	202	5,008	22 45	8,460	23,410	2 60	610	1,533	2 65	2,830	14,915	4 82	11,868	11,868	4 82	11,868	82,105	6 62
34 Thurston	211	4,808	22 45	1,822	4,727	3 42	139	863	2 85	2,543	8,431	3 60	6,969	6,969	3 60	6,969	11,261	11 86
35 Wadswarth	76	1,760	23 46	80	1,137	1 71	149	1,235	8 29	6,303	30,423	4 44	6,207	30,423	4 44	6,207	1,261	8 84
36 Walla Walla	158	3,760	24 54	28,964	198,367	4 78	149	1,235	8 29	6,303	30,423	4 44	6,207	30,423	4 44	6,207	1,261	8 84
37 Whitman	455	5,713	12 54	1,053	1,689	1 60	1,107	4,854	4 25	1,107	4,854	4 25	16,290	16,290	4 25	16,290	18,686	9 42
38 Yakima	293	7,122	16 41	16,414	469,148	4 06	2,469	13,630	6 62	19,760	80,230	4 21	22,430	22,430	4 21	22,430	4,108	17 24
39	361	13,880	24 09	114,844	469,148	4 06	2,469	13,630	6 62	19,760	80,230	4 21	22,430	22,430	4 21	22,430	4,108	17 24
Totals	8,595	\$21,590	\$25 50	492,704	\$1,879,172	\$3 89	7,046	\$90,893	\$5 23	116,063	\$502,249	\$4 76	\$959,009	\$959,009	\$4 76	\$959,009	\$1,008,998	\$17 23

Schedule "A"—Table I.—Continued.

COUNTIES	11			13			MOTORCYCLES			14			WATCHES		
	CARRIAGES, HACKS, BUGGIES, OUTTERS			BICYCLES			AUTOMOBILES								
	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value
1 Adams	799	\$7,920	\$9.94	18	\$125	\$6.94	3	\$65	\$21.60	397	\$164,405	\$138.23	251	\$1,335	\$5.31
2 Asotin	332	5,270	15.87	30	800	26.67	5	130	26.00	272	65,410	240.43	85	795	8.53
3 Benton	430	4,145	9.61	37	155	4.19	5	145	29.00	272	65,410	240.43	85	795	8.53
4 Blaine	430	4,145	9.61	37	155	4.19	5	145	29.00	272	65,410	240.43	85	795	8.53
5 Chelan	769	2,844	3.69	12	213	17.75	8	415	51.87	781	113,778	122.08	254	1,855	5.45
6 Chittenden	928	2,844	3.04	37	213	5.68	27	1,302	48.22	419	78,591	182.79	147	1,208	5.72
7 Clark	1,136	10,183	8.92	126	708	5.62	27	843	31.22	901	153,488	173.69	682	785	5.24
8 Columbia	415	4,360	10.31	24	145	6.04	3	170	56.67	300	68,683	135.47	337	8,890	6.08
9 Cowley	415	4,360	10.31	17	168	4.00	3	170	56.67	300	68,683	135.47	337	8,890	6.08
10 Douglas	1,087	9,423	8.69	34	115	3.41	2	180	36.85	685	127,770	138.23	325	1,367	5.73
11 Ferry	329	4,421	13.47	12	78	6.50	7	110	36.85	685	127,770	138.23	325	1,367	5.73
12 Franklin	166	1,423	8.54	12	78	6.50	1	45	28.00	33	37,715	163.37	70	1,108	1.58
13 Grant	409	5,806	11.66	3	13	6.00	2	45	40.00	33	37,715	163.37	70	1,108	1.58
14 Grays Harbor	768	7,817	10.33	22	160	7.27	4	250	62.50	332	37,715	163.37	113	703	6.24
15 Island	231	2,130	9.22	291	1,695	5.44	6	2,925	38.36	629	113,627	186.89	186	944	5.24
16 Jefferson	190	1,098	5.83	8	30	6.00	6	2,925	38.36	1,864	841,402	250.29	259	1,232	4.23
17 King	1,043	47,480	29.11	203	2,040	10.04	8	277	34.62	1,864	841,402	250.29	1,613	9,513	5.90
18 Kitsap	232	1,614	6.40	10	40	4.00	8	277	34.62	15,117	4,563,090	301.32	275	2,069	7.40
19 Kittitas	384	12,135	14.78	48	220	10.83	4	112	29.00	322	52,688	163.63	304	11,953	14.43
20 Klickitat	962	10,362	10.83	33	233	7.05	27	1,145	42.41	718	163,910	228.29	304	1,023	5.01
21 Lewis	777	9,816	12.63	144	927	6.44	13	543	41.77	381	74,371	196.20	810	2,340	7.55
22 Lincoln	1,323	15,953	12.02	19	355	18.68	28	986	33.48	1,139	238,975	190.08	683	2,539	4.80
23 Mason	113	880	7.64	12	72	6.00	20	2,043	102.10	1,864	880,680	228.74	243	3,591	5.72
24 Okanogan	1,064	17,885	10.45	10	60	6.00	13	500	38.46	151	26,080	172.71	73	1,484	5.96
25 Pacific	112	1,062	9.48	9	43	4.72	8	475	59.38	494	67,175	138.79	236	1,508	6.17
26 Pend Oreille	224	1,860	8.29	10	38	3.80	279	380	35.45	279	55,131	197.56	236	1,508	6.17
27 Pierce	515	2,638	18.71	414	4,095	11.34	115	1,383	26.14	5,214	1,678,743	321.99	108	763	6.41
28 San Juan	294	2,705	9.20	8	12	4.00	5,214	46,615	67.85	5,214	1,678,743	321.99	108	763	6.41
29 Skagit	342	2,885	8.49	11	75	6.82	2	45	22.50	13	13,297	102.15	13	88,378	12.55
30 Stannish	88	687	7.78	11	75	6.82	1	330	35.45	1,060	108,235	103.08	2	58	2.60
31 Snohomish	1,038	10,350	10.01	193	1,475	7.41	68	68	63.00	25	4,325	173.00	59	374	6.43
32 Spokane	1,749	26,240	15.00	632	4,775	7.54	2,511	3,310	50.87	2,511	871,035	227.04	1,240	11,340	9.14
33 Stevens	524	13,170	5.88	36	255	6.54	7,185	1,378,420	138.16	7,185	1,378,420	138.16	7,433	46,490	6.25
34 Thurston	523	1,682	3.23	67	351	5.24	173	58,230	123.17	473	58,230	123.17	473	2,023	4.28
35 Walla Walla	87	512	5.89	16	88	5.24	530	154,230	175.29	413	8,377	175.29	413	8,377	175.29
36 Waiilatpu	663	7,352	11.55	66	347	5.26	24	3,700	157.91	7	3,700	157.91	7	75	10.71
37 Whitman	1,040	6,793	6.50	67	233	3.47	1,768	399,100	226.50	450	399,100	226.50	450	2,972	6.90
38 Yakima	2,139	26,377	11.89	43	386	8.96	1,959	290,228	143.26	460	290,228	143.26	460	2,972	6.90
39	3,005	37,106	10.69	200	1,150	5.75	2,493	613,777	249.60	798	613,777	249.60	798	5,735	7.23
Totals	23,063	\$645,301	\$12.32	2,836	\$21,723	\$7.53	2,137	\$124,197	\$56.79	55,063	\$13,132,453	\$238.37	35,662	\$630,495	\$9.27

Schedule "A"—Table I.—Continued.

COUNTIES	16			17			18	19			20	21	22
	ORGANS AND MELODEONS			PIANOS, AUTOMATIC AND ELECTRIC PIANOS AND ORCHESTRIONS				SEWING MACHINES					
	No.	Value	Average value	No.	Value	Average value		No.	Value	Average value			
1 Adams	144	\$1,115	\$7.74	236	\$14,180	\$49.89	\$1,120	607	\$4,190	\$6.88	\$99,973	\$4,205	\$5,405
2 Asotin	70	1,800	13.67	223	\$1,865	\$7.87	1,065	380	2,765	8.73	2,775	2,775	2,775
3 Benton	54	1,270	13.51	889	19,105	58.07	1,905	668	2,765	8.52	25,780	5,180	4,180
4 Bellingham	55	1,270	13.51	889	19,105	58.07	1,905	668	2,765	8.52	25,780	5,180	4,180
5 Chelan	41	908	22.15	444	25,305	56.94	1,284	569	2,765	8.52	46,377	13,022	13,022
6 Clallam	412	2,650	8.61	1,128	\$7,128	48.29	7,065	2,578	17,308	6.67	121,392	11,708	11,007
7 Clark	66	550	8.46	381	16,433	49.65	988	491	2,913	8.58	47,472	1,388	2,380
8 Columbia	113	1,440	4.89	456	18,887	42.11	769	458	2,644	4.08	30,804	3,244	3,244
9 Cowlitz	168	1,140	7.81	119	8,688	59.10	2,338	1,113	5,135	4.61	24,104	2,084	1,900
10 Douglas	15	177	11.80	318	11,083	50.61	988	326	1,499	8.35	24,009	2,408	2,408
11 Ferry	13	158	13.17	318	11,083	50.61	988	326	1,499	8.35	24,009	2,408	2,408
12 Franklin	13	158	13.17	318	11,083	50.61	988	326	1,499	8.35	24,009	2,408	2,408
13 Grant	59	440	9.88	192	17,970	52.08	1,608	319	2,195	8.58	39,817	1,800	1,800
14 Grays Harbor	146	1,440	9.88	845	17,970	52.08	1,608	319	2,195	8.58	39,817	1,800	1,800
15 Island	91	1,615	17.74	1,225	86,072	63.66	9,565	953	5,435	5.70	53,005	4,873	6,880
16 Jefferson	87	681	17.00	125	4,075	36.84	2,288	287	11,005	8.71	227,773	26,538	108,223
17 King	1,763	41,670	23.85	198	14,800	74.75	1,528	324	2,740	8.48	11,005	3,418	3,418
18 Kittas	70	745	9.48	17,915	1,919,140	107.25	1,528	324	2,740	8.48	11,005	3,418	3,418
19 Kittas	70	745	9.48	17,915	1,919,140	107.25	1,528	324	2,740	8.48	11,005	3,418	3,418
20 Klickit	94	1,875	16.76	683	54,465	86.33	1,524	739	2,605	8.43	40,700	2,605	2,605
21 Lewis	211	2,882	10.47	413	23,437	80.22	2,685	1,086	8,440	8.43	141,715	12,340	10,880
22 Lincoln	483	2,882	15.21	1,077	29,459	80.22	4,975	2,811	16,615	7.19	69,357	8,585	4,038
23 Mason	122	2,817	20.63	768	8,067	69.52	4,125	1,480	10,200	7.08	126,179	7,171	17,884
24 Okanogan	54	1,848	10.06	109	8,865	86.10	2,820	1,869	9,485	8.50	92,950	5,883	9,963
25 Pacific	142	1,808	9.11	884	25,218	59.88	2,820	1,869	9,485	8.50	92,950	5,883	9,963
26 Pend Oreille	38	387	12.86	240	13,118	54.68	2,820	1,869	9,485	8.50	92,950	5,883	9,963
27 Pierce	1,089	24,110	23.14	8,088	911,665	106.60	2,820	1,869	9,485	8.50	92,950	5,883	9,963
28 San Juan	67	3,708	55.84	144	7,700	58.47	1,705	270	2,195	4.90	23,077	1,808	1,808
29 Skagit	14	110	7.86	800	14,965	40.54	1,705	270	2,195	4.90	23,077	1,808	1,808
30 Skamania	16	101	6.21	40	1,707	42.67	883	284	1,083	4.28	14,126	8,845	8,845
31 Snohomish	406	5,460	13.48	2,878	231,295	80.86	19,468	361	1,083	4.28	14,126	8,845	8,845
32 Spokane	1,231	13,880	11.88	9,876	683,180	64.01	19,468	361	1,083	4.28	14,126	8,845	8,845
33 Stevens	259	2,020	6.99	661	25,145	38.04	883	284	1,083	4.28	14,126	8,845	8,845
34 Thurston	178	2,080	11.48	643	41,765	64.94	4,209	1,176	7,591	6.71	109,500	11,143	9,904
35 Wabikium	4	60	12.50	56	2,760	47.68	15	89	301	5.10	4,678	185	1,385
36 Walla Walla	60	3,087	61.45	1,040	66,087	64.09	15	89	301	5.10	4,678	185	1,385
37 Whitcom	682	13,210	23.70	1,651	65,738	42.11	4,490	975	5,623	6.77	208,170	15,319	29,815
38 Yakima	500	2,000	11.11	1,058	181,825	92.89	5,974	2,168	9,129	8.21	157,480	11,918	29,408
Totals	8,906	\$1,671,761	\$16.48	59,134	\$4,918,677	\$88.09	\$897,768	102,837	\$648,288	\$8.24	\$14,397,440	\$738,705	\$2,007,018

Schedule "A"—Table I.—Continued.

COUNTIES	23	24	25	26	27	28	29	30	31	32	33
	Diamonds, jewelry, firearms, clothing, etc.	Agricultural implements, machinery, and harness	Mechanics', tools and im- plements	Royalties and patent rights, annuities, etc.	Thrashing machines, hay presses, traction engines, etc.	Donkey and logging engines, etc.	Steam- boats, sailing vessels, launches, dredges, etc.	Lumber	Saw logs	Shingles and lath	Sash, doors, mouldings, pillars, etc.
1 Adams	\$2,135	\$30,240	\$3,935	\$250	\$45,755	\$5,935	.....	\$10,855	\$200	\$1,045	\$2,005
2 Asotin	700	29,240	5,780	.....	15,015	3,297	.....	9,180	670	.....	.....
3 Benton	3,395	31,430	7,195	25	7,595	3,297	.....	10,140	1,100	1,100	200
4 Bland	1,232	44,543	3,275	80	2,070	1,213	4,435	18,985	8,645	975	955
5 Blaine	695	9,771	2,442	.....	1,944	122,123	11,390	32,350	4,395	1,485	750
6 Clallam	4,447	45,722	16,532	62	4,230	53,945	19,200	10,010	8,245	1,45	1,495
7 Clatsop	775	40,372	3,937	.....	32,372	.....	.....	3,200	425	675	255
8 Columbia	1,232	11,357	3,937	8	5,361	129,510	17,304	4,079	23,763	.....	.....
9 Cowlitz	1,232	108,410	2,100	60	61,980	2,070	3,504	4,079	23,763	23	.....
10 Douglas	912	17,692	2,473	100	3,914	2,070	3,504	742	9,322	717	1,390
11 Franklin	3,031	31,995	2,975	100	14,005	1,080	2,383	7,375	9,322	717	1,390
12 Garfield	1,937	68,839	2,772	30	6,492	2,383	2,383	5,512	.....	.....	.....
13 Grant	1,937	60,273	7,032	108	29,087	2,383	109,737	4,750	210,012	47,613	15,420
14 Grays Harbor	41,517	16,730	21,233	885	2,087	677,210	4,708	500,607	41,032	1,032	.....
15 Inland	80	6,307	2,235	.....	2,080	65,235	37,151	1,522	13,065	1,032	.....
16 Jefferson	3,235	6,708	4,259	125	2,800	429,300	2,125,410	464,710	100,740	67,720	46,170
17 King	265,790	99,910	135,550	1,082,375	38,360	12,392	109,173	23,255	13,157	1,740	1,215
18 Kitsap	847	6,839	1,033	6,610	39,310	14,397	2,519	6,800	5,810	401	3,410
19 Kittitas	2,494	76,690	9,145	.....	17,072	14,397	2,519	17,647	3,235	11,307	900
20 Klickitat	2,893	47,091	4,438	.....	133,310	3,935	2,970	116,384	3,235	3,136	12,354
21 Lewis	7,979	180,702	15,747	2,480	2,276	3,935	20,470	874	22,555	655	1,065
22 Lincoln	1,368	5,433	2,503	.....	2,276	6,625	4,753	10,515	4,920	615	250
23 Mason	2,640	91,055	6,803	.....	21,905	3,900	58,113	190,275	86,375	14,213	250
24 Okanogan	3,565	4,439	1,842	.....	230	113,250	58,113	190,275	86,375	14,213	250
25 Pacific	1,782	8,397	1,905	.....	2,997	2,412	2,065	244,615	60,032	4,000	.....
26 Pend Oreille	38,176	88,395	97,942	12,240	14,908	137,800	269,483	259,142	45,323	16,880	113,742
27 Pierce	497	6,549	1,198	.....	2,847	3,172	36,363	50	158	.....	.....
28 San Juan	40	27,070	3,465	.....	10,360	5,330	10,070	5,430	1,140	1,140	2,000
29 Skagit	880	1,303	.....	.....	467	66,333	6,730	925	14,700	.....	600
30 Skamania	11,045	55,075	51,000	.....	4,905	40,525	40,525	405,520	113,455	74,150	8,395
31 Snohomish	81,925	151,140	84,505	2,755	65,030	34,435	19,150	160,350	15,070	2,940	5,340
32 Stevens	3,500	43,000	6,437	.....	12,357	3,135	2,300	34,362	18,070	730	857
33 Thurston	6,340	23,435	10,439	597	5,762	44,435	22,305	22,367	17,594	2,175	5,425
34 Wahkiakum	30	2,455	2,550	.....	700	77,525	27,395	338	24,150	.....	.....
35 Walla Walla	7,622	119,972	9,634	.....	59,025	2,065	700	22,555	338	387	19,035
36 Waiilatpe	4,362	33,390	17,384	.....	138,370	49,682	187,143	63,946	40,464	15,420	.....
37 Whitman	15,690	214,007	23,655	12	.....	.....	.....	44,625	17,935	4,735	15,235
38 Yakima	41,125	175,335	26,370	.....	30,150	9,000	2,325	44,625	17,935	4,735	15,235
Totals	\$920,889	\$9,005,444	\$513,979	\$1,103,807	\$938,555	\$2,725,695	\$3,137,404	\$2,711,043	\$927,505	\$273,344	\$351,033

Schedule "A"—Table I.—Continued.

COUNTIES	34	35	36	37	38	39	40	41	42	43	44
	Wood, coal, wool, hides, etc.	Goods and merchandise, including fixtures and appliances	Manufacturers' materials, manufactured articles, etc.	Manufacturers' tools, implements, machinery, etc.	Theatre furniture and motion picture machines	Capital stock of incorporated banks	Money	Stock and fixtures of billiard and pool rooms, etc.	Furniture and fixtures of hotels, restaurants, logging houses	Hay, grain and other farm products in hands of producers	Hay, grain and other farm products in warehouse, elevator or cold storage
1 Adams	\$1,886	\$98,680	\$1,380	\$8,645	\$800	\$101,040	\$700	\$2,485	\$1,735	\$13,085	\$458,150
2 Asotin	.....	72,510	1,700	6,140	2,050	38,285	.....	865	1,700	82,850	389,545
3 Benton	1,685	160,660	2,505	1,550	800	71,005	.....	1,880	5,300	7,210	45,845
4 Chelan	.....	416,785	59,135	54,900	2,515	101,205	.....	7,818	15,200	4,455	81,082
5 Chittam	35	108,142	2,540	157,985	2,875	25,054	.....	2,875	12,992	.....	.....
6 Clarke	3,822	269,340	78,895	384,705	2,760	120,700	30,885	1,817	7,768	2,097	510
7 Columbia	25	111,202	1,250	4,440	275	149,452	.....	675	1,880	29,062	304,985
8 Cowlitz	57	113,485	2,334	147,814	.....	24,168	.....	1,783	4,174	231	.....
9 Douglas	84	200,234	3,116	3,695	1,064	85,502	2,760	2,092	25,885	823,595	40,900
10 Ferry	.....	84,513	1,450	81,297	787	23,844	1,645	670	1,087	330	2,900
11 Franklin	915	72,008	18,695	13,100	478	56,858	76	2,115	4,770	5,990	249,115
12 Grant	834	108,578	660	5,380	80	62,802	.....	580	1,212	112,579	174,191
13 Grays Harbor	1,165	759,580	958	3,235	220	69,200	26,520	3,108	7,000	10,713	188,108
14 Island	.....	24,923	7,155	991,672	5,330	355,240	100	13,888	69,492	2,093	972
15 Jefferson	115	76,422	17,200	10,482	.....	16,065	.....	210	580	770	58
16 King	.....	76,422	18,541	85,454	.....	41,697	12,975	3,812	2,870	40,200	6,840
17 Kitsap	73,610	11,241,880	589,330	2,349,870	47,730	4,014,294	98,010	77,880	697,140	.....	.....
18 Kittitas	13,700	388,425	11,655	164,575	1,205	80,587	2,475	1,058	5,635	105,070	8,065
19 Klallam	8,200	182,825	4,480	137,615	3,115	104,880	.....	6,435	14,285	11,817	107,300
20 Lewis	1,240	388,707	598	40,838	1,275	105,152	.....	1,475	3,709	2,808	2,387
21 Lincoln	.....	495,892	9,980	29,225	2,580	200,472	9,375	5,077	6,140	25,805	1,389,982
22 Mason	25	51,615	1,140	7,175	75	19,875	.....	2,823	3,480	.....	.....
23 Okanogan	717	223,505	4,613	41,025	1,712	139,495	.....	3,519	11,880	18,035	11,282
24 Pacific	114	105,609	28,038	275,098	1,083	50,089	.....	4,327	11,622	727	874
25 Pend Oreille	1,597	59,247	42,068	53,695	500	21,385	.....	1,497	1,935	8,735	723
26 Pierce	33,855	3,697,725	295,472	1,944,230	25,865	1,023,360	18,005	21,222	265,820	7,050	590,561
27 San Juan	800	41,305	9,555	30,388	350	20,000	3,797	2,835	1,235	435	.....
28 Skagit	30	277,700	5,210	693,385	4,400	141,465	.....	2,850	8,130	8,885	9,740
29 Skamania	720	21,875	575	14,550	.....	1,770	.....	250	1,800	.....	.....
30 Snohomish	22,000	1,067,395	55,310	1,085,780	11,810	388,485	1,100	12,140	57,400	885	82,980
31 Spokane	27,115	6,695,685	272,450	398,825	27,470	1,813,080	6,685	42,530	392,680	29,810	514,450
32 Stevens	6,682	180,337	83,005	139,922	86,468	85,255	387	1,615	7,385	11,985	1,600
33 Thurston	977	278,308	69,390	187,055	8,900	124,775	1,900	2,498	11,087	4,680	65
34 Wahkiakum	75	21,650	14,860	20,980	80	1,600	.....	530	780	.....	.....
35 Whatcom	10,922	678,945	39,477	46,295	5,800	705,685	.....	5,670	17,112	27,600	913,738
36 Whitman	1,382	721,824	18,474	680,094	6,128	285,272	.....	6,256	25,242	1,192	454
37 Yakima	43,880	885,878	10,410	.....	6,128	677,660	.....	6,085	19,317	.....	678,572
38	12,505	919,190	21,425	17,095	3,870	801,000	.....	15,120	89,945	77,765	109,180
Totals	\$270,687	\$80,384,280	\$1,944,043	\$10,455,779	\$176,760	\$11,947,131	\$637,590	\$603,945	\$1,735,191	\$1,140,895	\$5,973,998

Schedule "A"—Table I.—Concluded.

COUNTIES	45 Warehouses, gas, electric light, power, water, tele- phone con- duits includ- ing franchises	46 Improve- ments on lands held under the laws of U. S. or leased from state	47 Fish traps and locations	48 Value of timber held separately from land	49 Lease- holds	50 All other items personal property	TOTALS		
							Aggregate value of personal property, as equalized by county board	Aggregate value of exemptions	Aggregate value taxable per- sonal property, equalized by county board
1 Adams	\$51,465	\$2,600	\$1,275		\$5,065	\$3,400	\$2,245,270	\$192,370	\$2,060,900
2 Asotin		\$8,570	\$7,980		1,785	465	1,245,540	95,450	1,146,090
3 Benton		\$2,700	105,990			3,965	1,188,215	175,065	983,150
4 Bellingham	\$9,375	19,625	295,140			8,275	1,689,235	247,370	1,438,865
5 Okanogan		7,991	126,210	\$25,000		23,789	1,056,168	159,168	900,000
6 Okanogan		1,925	235,210	28,172	15,385	36,920	2,295,891	591,025	1,694,866
7 Okanogan		2,869	235,210	20,682	2,755	5,070	1,374,689	149,770	1,225,219
8 Okanogan		3,430	81,717	405	488	13,963	542,159	90,700	728,069
9 Douglas		15,363				2,254	2,145,669	233,253	1,922,440
10 Ferry		67,078				8,671	615,171	90,928	524,243
11 Franklin		15,713	32,290		872	1,038	1,094,089	100,370	983,716
12 Garfield		2,043	97,800		8,125	843	1,190,484	70,560	1,119,924
13 Grant		2,895	27,013			9,938	1,725,898	240,508	1,484,705
14 Grant		29,790	33,295	127	2,868	7,320	6,006,273	684,738	4,971,085
15 Grays Harbor		56,415	412,638	2,452		68,963	352,683	78,533	274,150
16 Island		125	3,300	68,750		71,510	745,705	65,450	682,255
17 Jefferson		2,850	82,793	3,050	2,175	80,172	44,882,514	8,574,940	36,307,574
18 King		746,625	3,145,625	3,500	4,065	80,000	2,859,275	244,500	2,614,775
19 Kitsap		2,300	116,135			54,089	1,852,054	250,258	1,601,796
20 Kittitas		10,815	116,340	22,455	7,561	104,885	3,085,960	559,061	2,526,919
21 Klickitat		7,838	441,102	6,000		1,327	6,061,617	371,407	4,690,210
22 Lewis		4,853	116,645	141,880		92,685	600,854	80,381	520,473
23 Lincoln		16,567	408,215			108,775	1,579,151	32,350	1,546,801
24 Mason			16,273	50,382	4,405	7,150	2,070,577	94,130	1,976,447
25 Okanogan		54,217	16,273			145,450	20,070,577	4,965,541	15,114,036
26 Pacific		3,975	86,394	24,332	2,735	8,893	1,581,785	70,896	1,510,889
27 Pend Oreille		12,540	36,445	75,763	13,700	5,040	1,579,151	32,350	1,546,801
28 Pierce		180,315	3,008,708	12,690	13	7,150	2,070,577	94,130	1,976,447
29 San Juan		15	408,215	4,805	99,820	145,450	20,070,577	4,965,541	15,114,036
30 Skagit		1,570	17,625	106,650	4,915	8,893	1,581,785	70,896	1,510,889
31 Skamania		2,300	149,555	700	9,910	5,040	1,579,151	32,350	1,546,801
32 Spokane		1,850	184,072	1,125	150	5,742	1,581,785	70,896	1,510,889
33 Stevens		6,725	515,040	108,335	4,300	48,585	6,317,060	1,009,150	5,307,910
34 Thurston		20,565	2,771,230	3,090	60	36,425	18,685,495	3,101,010	15,584,485
35 Walla Walla		40,232	820,475	1,580	1,367	79,990	1,985,908	449,943	1,535,965
36 Whitman		1,415	45,370	84,582	19,708	276,316	2,017,478	244,060	1,773,418
37 Yakima		64,325	45,370	16,300	6,495	98,445	400,169	32,583	367,586
38 Walla Walla		75,700	219,015	6,732	6,732	4,544,083	4,544,083	309,040	4,853,123
39 Whitman		154,595	225,910	33,444	52,902	71,506	4,544,083	425,640	5,069,723
40 Yakima		99,725	158,769	629,894	82,902	6,651,313	6,651,313	582,325	7,233,638
Totals	\$1,301,108	\$1,305,139	\$15,467,232	\$900,468	\$2,350	\$1,004,070	\$1,008,510,281	\$67,271,508	\$1,075,781,789

SCHEDULE "A"—Table II.

Abstract of Assessment of All Personal Property in the State of Washington
for the Year 1917.

No. of Item	DESCRIPTION OF PROPERTY	Number	Assessed value	Average value
1	Horses: { One year old.....	25,416	\$879,822	\$14 89
	Two years old.....	27,151	625,898	23 04
	Three years old and over.....	44,101	1,258,958	30 70
	Work horses.....	186,908	7,516,918	47 88
	Stallions.....	1,008	146,337	133 89
2	Mules and Asses.....	17,516	904,325	51 63
3	Stock Cattle: { Yearlings.....	117,285	1,035,285	9 34
	Two years old.....	79,142	1,231,340	15 55
	Three years old and over.....	67,677	1,419,920	20 98
4	Milch Cows.....	190,351	4,868,143	25 55
5	Bulls, kept for breeding purposes.....	8,235	211,639	25 50
6	Stock Sheep and Goats.....	482,704	1,578,172	3 89
7	Sheep—Bucks kept for breeding purposes.....	7,045	36,823	5 22
8	Hogs.....	116,068	532,249	4 76
9	Poultry.....		289,098	
10	Drays, Trucks, Wagons and Sleighs.....	68,508	1,098,908	17 22
11	Carriages, Cabs, Hacks, Buggies and Outters.....	23,068	345,301	12 32
12	Bicycles.....	2,889	21,723	7 53
13	Motorcycles.....	2,157	124,197	58 79
14	Automobiles.....	55,068	13,132,458	238 37
15	Watches.....	85,682	330,435	9 27
16	Organs.....	8,935	147,751	16 43
17	Pianos, Automatic and Electric Pianos and Orchestrions.....	59,124	4,913,577	83 09
18	Band Instruments, Violins, Phonographs and Music Boxes.....		397,798	
19	Sewing Machines.....	102,337	843,293	8 24
20	Household Furniture, including clocks, rugs, gold and silver plate, paintings, statuary, engravings, etc.....		14,297,440	
21	Libraries, Books, Scientific Instruments, etc.....		783,769	
22	Office Furniture, Safes, Typewriters, Adding Machines, Cash Registers, etc.....		2,007,013	
23	Diamonds, Jewelry, Firearms, Clothing, etc.....		620,899	
24	Agricultural Implements, Machinery and Harness.....		2,096,444	
25	Mechanics' Tools and Implements.....		613,979	
26	Royalties, Patent Rights, Annuities, etc.....		1,108,807	
27	Threshing Machines, Hay Presses, Traction Engines, etc.....		968,555	
28	Donkey and Logging Engines, Pile Drivers, Hoisting Engines, etc.....		2,726,626	
29	Steamboats, Sailing Vessels, Launches, Dredges, Barges, Ferries, Row Boats, etc.....		3,157,404	
30	Lumber (M. feet).....		2,731,043	
31	Saw Logs (M. feet).....		927,805	
32	Shingles and Lath (M.).....		278,344	
33	Sash, Doors, Mouldings, Pillars, Finishing Lumber, etc.....		261,068	
34	Wood, Coal, Wool, Hides, etc.....		270,627	
35	Goods and Merchandise, including fixtures and appliances used in business.....		30,524,520	
36	Manufacturers' Materials and Manufactured Articles, including brick, stone, building material, etc.....		1,944,043	
37	Manufacturers' Tools, Implements and Machinery, including engines and boilers.....		10,455,779	
38	Theatre Furniture and Motion Picture Machines.....		175,760	
39	Capital Stock of Incorporated Banks.....		11,947,121	
40	Money.....		307,980	
41	Stock and Fixtures of Billiard and Pool Rooms, Bowling Alleys, etc.....		253,945	
42	Furniture and fixtures of Hotels, Restaurants, Lodging Houses.....		1,792,191	

Schedule "A"—Table II.—Concluded.

No. of item	DESCRIPTION OF PROPERTY	Number	Assessed value	Average value
43	Hay, Grain and other farm products in hands of producers		\$1,140,885	
44	Hay, Grain and other farm products in Warehouse, Elevator or Cold Storage.....		5,972,908	
45	Elevators, Warehouses, or other improvements on lands, the title of which is vested in any railroad company, or other person, firm or corporation.....		1,361,108	
46	Improvements on lands held under the laws of the United States, or leased from the State.....		1,306,139	
47	Property of Gas, Electric Light, Power, Water, Telephone and other public service concerns, including franchises		15,467,232	
48	Fish Traps and Locations.....		960,466	
49	Value of timber held separately from land.....		115,901	
50	Leaseholds		500,771	
51	All other items of personal property.....		1,604,070	
	Aggregate value of personal property as equalized by county boards.....		\$168,510,231	
	Aggregate value of exemptions under section 5 of Law		27,271,508	
	Aggregate value of taxable property as equalized....		\$136,238,708	

SCHEDULE "B"—Abstract of Assessment of Real Property in the State of Washington, as Returned by the County Boards for the Year 1917.

COUNTIES		Total number of acres of land, ex- clusive of town and city lots	Number of acres fenced	Number of acres of timber lands	Number of acres of other unim- proved lands	Number of acres of improved lands
1	Adams	1,108,761	1,089,945	.....	298,049	812,701
2	Asotin	240,315	196,500	.....	150,941	89,374
3	Benton	803,298	.....	.....	775,640	27,658
4	Chelan	550,743	90,140	29,908	470,762	50,048
5	Clallam	582,027	18,560	384,316	129,790	17,911
6	Clarke	306,630	162,000	21,000	279,436	66,196
7	Columbia	358,568	180,868	.....	177,700	180,868
8	Cowlitz	623,240	56,568	258,700	349,498	16,481
9	Douglas	988,540	764,085	.....	419,082	514,458
10	Ferry	160,915	41,275	61,288	84,769	14,867
11	Franklin	670,598	458,024	.....	342,777	327,821
12	Garfield	324,643	324,643	.....	173,251	151,392
13	Grant	1,418,412	694,674	.....	963,960	464,422
14	Grays Harbor	819,989	.....	434,573	362,452	22,914
15	Island	120,126	14,115	8,208	100,335	11,583
16	Jefferson	281,833	7,014	173,198	101,474	7,211
17	King	823,977	.....	307,496	462,563	63,928
18	Kitsap	223,978	24,257	40,460	171,670	11,848
19	Kittitas	846,420	196,924	307,133	455,088	84,248
20	Klickitat	982,270	404,264	226,515	322,278	183,477
21	Lewis	962,732	96,273	451,600	470,500	60,631
22	Lincoln	1,337,220	1,818,180	.....	551,458	786,822
23	Mason	410,187	.....	162,596	226,905	10,686
24	Okanogan	607,584	208,267	64,136	412,440	131,007
25	Pacific	626,973	.....	309,965	192,884	23,749
26	Pend Oreille	497,496	30,376	304,100	127,496	15,900
27	Pierce	659,773	.....	307,277	307,064	51,432
28	San Juan	101,415	.....	.....	86,865	14,550
29	Skagit	590,948	.....	238,725	260,913	62,309
30	Skamania	230,985	9,040	201,353	24,056	5,524
31	Snohomish	564,126	49,461	152,142	373,575	38,407
32	Spokane	1,000,555	647,962	75,890	544,982	377,110
33	Stevens	1,049,211	180,740	221,813	739,138	88,760
34	Thurston	426,143	.....	162,080	238,178	25,875
35	Wahkiakum	149,390	7,250	56,181	90,159	4,060
36	Walla Walla	752,687	715,414	.....	232,758	519,929
37	Whatcom	407,725	77,850	100,400	248,794	58,541
38	Whitman	1,250,586	1,243,640	.....	294,886	955,700
39	Yakima	754,772	.....	.....	610,007	144,765
Totals		924,480,880	.....	5,083,300	12,861,580	6,494,112

Schedule "B"—Continued.

COUNTIES		Valuation of timber lands as equalized by county boards		Valuation of other unimproved lands as equalized by county boards		Valuation of improved lands as equalized by county boards	
		Average value per acre	Total value	Average value per acre	Total value	Average value per acre	Total value
1	Adams			\$1 91	\$565,775	\$10 11	\$8,218,380
2	Asotin			3 00	452,825	22 81	1,908,755
3	Benton			4 85	3,877,475	60 74	1,679,210
4	Chelan	\$6 20	\$185,584	2 14	1,010,881	181 95	6,608,392
5	Clallam	23 10	8,879,585	7 81	948,561	30 77	551,165
6	Clarke	33 00	688,210	9 96	2,788,380	41 81	2,767,640
7	Columbia			2 62	465,690	22 89	4,189,620
8	Cowlitz	15 61	4,069,448	3 30	1,159,392	28 23	465,298
9	Douglas			3 18	1,304,435	11 89	6,119,615
10	Ferry	5 14	351,056	9 72	823,940	15 66	233,069
11	Franklin			3 41	1,170,501	5 55	1,820,980
12	Garfield			2 92	509,750	16 21	2,454,980
13	Grant			2 61	2,490,585	9 94	4,616,340
14	Grays Harbor	31 57	13,718,395	4 75	1,722,067	51 96	1,190,671
15	Island	28 21	231,555	3 48	851,240	30 33	351,360
16	Jefferson	19 37	3,354,890	6 62	671,296	36 45	255,619
17	King	19 10	5,872,983	21 68	9,810,891	184 78	11,812,616
18	Kitsap	20 50	829,510	12 91	2,216,899	33 71	399,400
19	Kittitas	3 76	1,154,537	2 34	1,068,846	56 96	4,798,900
20	Klickitat	6 89	1,569,491	3 42	1,738,773	15 97	2,929,989
21	Lewis	16 77	7,239,001	4 80	2,258,111	31 61	1,916,327
22	Lincoln			2 00	1,106,692	16 70	13,120,145
23	Mason	20 28	3,296,680	3 65	895,805	18 90	201,635
24	Okanogan	3 49	224,020	4 02	1,669,370	16 01	2,068,315
25	Pacific	19 71	6,108,909	6 65	1,281,773	18 80	446,396
26	Pend Oreille	6 15	1,870,175	3 22	570,759	15 70	249,600
27	Pierce	19 29	5,810,820	11 54	3,543,265	116 08	5,967,890
28	San Juan			3 15	273,655	30 73	436,500
29	Skagit	12 22	2,918,420	5 62	1,433,770	47 07	2,983,280
30	Skamania	10 38	2,090,591	21 97	628,617	33 30	183,896
31	Snohomish	26 07	3,966,590	14 92	5,576,735	52 16	2,008,425
32	Spokane	5 54	413,915	4 47	2,436,855	22 56	3,508,650
33	Stevens	4 36	965,910	3 15	2,380,242	15 89	1,410,160
34	Thurston	17 51	2,888,198	7 70	1,882,973	23 09	597,457
35	Wahkiakum	12 11	668,450	3 02	272,220	11 23	45,500
36	Walla Walla			4 59	999,325	21 01	10,922,520
37	Whatcom	19 85	1,986,129	13 18	3,274,316	42 13	2,469,300
38	Whitman			4 67	1,377,520	23 41	22,370,740
39	Yakima		64,040	2 38	1,452,370	84 02	12,168,990
Totals		\$16 16	\$51,344,010	\$5 31	\$68,248,014	\$23 32	\$151,448,085

Schedule "B"—Concluded.

COUNTIES	Valuation of improvements on land as equalized by county boards		Valuation of city and town lots (exclusive of improvements) as equalized by county board	Valuation of improvements on city and town lots as equalized by county board	Aggregate valuation of all real property, including improvements (except steam and electric railways) as equalized by county board
	Average value per acre	Total value			
1 Adams	\$0 75	\$305,940	\$249,611	\$659,875	\$10,299,581
2 Asotin	4 20	375,985	396,355	373,580	2,597,430
3 Benton	11 45	319,045	423,330	443,800	6,243,980
4 Blaine	16 01	801,330	1,422,497	1,356,330	11,390,504
5 Challam	10 64	199,680	1,734,697	424,455	12,729,143
6 Clarke	12 24	510,045	2,204,580	1,572,225	10,821,380
7 Columbia	1 68	304,270	219,710	482,020	5,611,240
8 Cowlitz	14 72	242,973	424,012	336,113	6,000,486
9 Douglas	0 95	426,905	179,108	386,745	8,426,896
10 Ferry	8 58	127,514	137,909	145,350	1,818,948
11 Franklin	0 26	84,930	484,101	358,758	3,914,245
12 Garfield	1 59	240,165	148,396	237,110	3,382,900
13 Grant	1 31	611,395	295,805	333,900	3,343,235
14 Grays Harbor	39 42	908,177	3,619,452	2,923,017	24,076,779
15 Island	9 97	115,505	98,392	61,695	1,705,247
16 Jefferson	26 81	198,330	729,315	401,340	5,695,239
17 King	48 19	3,081,180	124,951,981	48,978,390	204,505,901
18 Kitsap	47 17	558,901	1,624,907	695,375	6,124,902
19 Kittitas	7 24	610,090	1,370,080	1,565,495	10,583,548
20 Klickitat	3 62	664,225	466,424	450,770	7,654,573
21 Lewis	11 52	698,725	1,728,241	1,486,569	15,336,304
22 Lincoln	1 88	1,477,957	359,895	1,158,021	17,221,710
23 Mason	10 78	115,010	99,913	120,960	4,700,363
24 Okanogan	4 16	545,695	347,630	369,235	5,244,255
25 Pacific	15 13	359,410	1,508,130	315,665	10,520,255
26 Pend Oreille	26 92	423,019	169,049	273,760	3,593,322
27 Pierce	52 17	2,633,530	29,639,033	14,532,215	62,105,845
28 San Juan	20 15	298,135	59,290	83,300	1,150,830
29 Skagit	9 75	607,370	1,024,029	611,760	9,729,130
30 Skamania	24 20	133,639	27,275	60,370	3,024,436
31 Snohomish	41 73	1,602,970	7,552,770	4,607,170	25,309,680
32 Spokane	5 47	2,051,000	39,399,272	31,064,175	32,853,397
33 Stevens	11 67	1,086,230	353,182	373,020	6,509,744
34 Thurston	22 98	594,515	1,698,630	1,300,632	8,327,423
35 Wahkiakum	37 00	149,380	45,210	47,750	1,229,010
36 Walla Walla	2 20	1,143,820	4,622,910	3,317,623	21,505,300
37 Whatcom	17 17	1,005,140	4,648,768	3,606,532	14,994,205
38 Whitman	1 47	1,406,370	1,476,100	2,454,350	29,085,030
39 Yakima	19 47	2,319,000	3,716,685	3,848,325	24,094,410
Totals.....	\$1 69	\$30,487,070	\$235,479,841	\$132,937,218	\$708,944,238

SCHEDULE "C"—Table I.—STEAM RAILROADS.—Abstract of Assessment of the Operating Property of Steam Railroads, Electric Railways and Telegraph Lines in the State of Washington, as Revised, Corrected and Equalized by the State Board of Equalization for the Year 1917.

BELLINGHAM & NORTHERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	As'd ratio to actual value (Fct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value	Equalized value
Whatcom....	Main Line	35.90	44.308	\$20,468 73	\$308,840	\$7,347 56	\$325,556	\$3,402 89	\$150,782	\$64,194	\$379,680
	Main Track		25.234	4,068 84	108,291	1,469 51	37,062	680 82	17,172	6,165	43,247
	Sidings										
	Branch Lines—										
	Main Track		16.600	12,280 04	208,849	4,408 53	73,182	2,041 55	33,990	12,168	85,348
	Sidings		2.311	2,046 67	4,790	734 75	1,698	840 28	789	288	1,080
	Totals		88.453	.....	\$1,218,710	.....	\$437,518	.....	\$202,610	\$72,737	\$610,255

BLAKELY RAILROAD.

COUNTIES	CLASSIFICATION OF TRACK	As'd ratio to actual value (Fct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value	Equalized value
Mason.....	Main Line	37.00	14.580	\$6,880 00	\$90,873	\$2,534 50	\$36,368	\$3,138 67	\$40,418	\$17,175	\$54,128
	Main Track		.600	1,570 00	822	500 90	304	688 73	352	141	445
	Sidings										
	Totals		15.180	.....	\$100,695	.....	\$37,297	.....	\$40,800	\$17,316	\$54,578

CANADIAN PACIFIC RAILWAY (Equipment only).

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value
King.....	On line N. P. Ry.)....	46.00	.....	.....	.....	.....	\$58 48	\$14,066	\$251 49	\$5,700
Skagit.....	On line N. P. Ry.)....	27.00	.....	.....	.....	.....	588 48	16,070	183 48	4,801
Snohomish...	On line N. P. Ry.)....	41.60	.....	.....	.....	.....	588 48	24,178	236 47	10,088
Whatcom....	On line N. P. Ry.)....	35.30	.....	.....	.....	.....	588 48	16,456	204 07	5,908
	Totals.....	.....	.....	.....	.....	.....	.....	\$72,000	.....	\$27,227

CENTRALIA EASTERN RAILROAD.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value
Lewis.....	Main Line	35.80	\$7,600 00	\$63,854	.....	.....	\$144 80	\$1,026	.....	.....
	Main Track .....	.....	1,980 00	1,686	544 16	\$19,280 608	28 99	82	10 37	\$367 12
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	.....	.....	\$55,540	.....	\$19,888	.....	\$1,068	.....	\$379
Thurston...	Main Line	40.00	\$7,600 00	\$11,483	\$8,040 00	\$4,588	\$144 80	\$219	\$67 92	\$38
	Main Track .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals....	Main Line—	.....	\$7,600 00	\$65,337	.....	\$23,873 608	\$144 80	\$1,245	.....	\$455 12
	Main Track .....	.....	1,980 00	1,686	.....	.....	28 99	82	.....	.....
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	.....	.....	\$67,023	.....	\$24,476	.....	\$1,277	.....	\$467

Schedule "C"—Table I.—Steam Railroads—Continued.

COWLITZ, CHEHALIS & CASCADE RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Boiling Stock			TOTAL VALUATION Real and Personal Property	
			Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value
Lewis.....	Main Line	35.80	\$7,000 00	\$128,240	\$2,595 00	\$45,910	\$239 89	\$4,395	\$1,573	\$132,685
	Main Track .....	.....	1,400 00	1,610	\$91 20	576	47 98	58	17 18	1,066
	Sidings .....	.....	.....	\$129,850	.....	\$46,486	.....	\$4,450	.....	\$134,300
	Totals .....	.....	.....	.....	.....	.....	.....	.....	.....	\$48,079

CHICAGO, MILWAUKEE & ST. PAUL RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Boiling Stock			TOTAL VALUATION Real and Personal Property	
			Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value
Adams.....	Main Line	40.00	\$76,913 80	\$6,781,234	\$30,765 12	\$2,292,404	\$7,543 21	\$682,000	\$3,017 28	\$2,295,836
	Main Track .....	.....	18,288	280,547	6,153 02	112,319	1,808 05	27,515	608 46	11,006
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Branch Lines— Main Track .....	.....	15,382 59	455,247	6,153 02	182,000	1,508 65	44,648	603 46	17,869
	Sidings .....	.....	3,845 04	9,600	1,889 20	3,824	377 16	288	180 86	375
	Totals .....	.....	.....	\$6,476,589	.....	\$2,500,636	.....	\$836,191	.....	\$254,076
Benton.....	Branch Lines .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track	48.00	\$15,382 59	\$489,841	\$8,614 50	\$188,917	\$1,508 65	\$48,089	\$946 72	\$18,569
	Sidings .....	.....	2,897	9,819	1,688 68	3,964	377 16	904	106 18	389
	Totals .....	.....	.....	\$448,569	.....	\$192,881	.....	\$48,993	.....	\$19,957

Grant.....	38.50	35,660	\$76,912 80	\$2,519 623	\$80,380 68	\$1,113,751	\$7,543 21	\$276,534	\$2,979 57	\$109,231	\$5,000,157	\$1,922,992
Main Tract		5,818	15,882 56	89,498	0,076 11	35,351	1,508 65	8,777	585 92	3,467	38,273	36,513
Branch Lines—												
Main Tract		32,988	15,882 56	597,363	6,076 11	200,408	1,508 65	49,780	685 92	19,685	537,123	220,088
Sidings		3,382	3,845 64	12,622	1,519 08	4,865	377 16	1,398	148 98	489	13,860	5,474
Totals.....		78,743		\$3,429,104		\$1,354,495		\$388,309		\$132,942	\$3,765,413	\$1,457,337
Grays Harbor B'ch.....	38.00	2,131	\$7,691 28	\$16,775	\$2,922 60	\$5,374	\$754 32	\$1,645	\$236 64	\$925	\$13,420	\$6,999
Sidings												
King.....	46.00	51,873	\$76,912 80	\$3,690,008	\$379 89	\$1,835,391	\$7,543 21	\$391,239	\$3,499 88	\$179,993	\$4,389,387	\$2,015,354
Main Tract		46,727	15,882 56	749,546	7,075 98	344,791	1,508 65	73,512	688 98	38,516	823,068	378,007
Everett Branch—												
Main Tract		34,000	26,919 48	916,877	12,382 98	427,764	2,640 12	89,923	1,214 46	41,865	1,008,800	498,129
Sidings		4,366	7,691 28	33,808	3,387 99	15,549	754 32	3,315	346 90	1,625	37,118	17,074
White River Branch—												
Main Tract		16,085	19,228 20	306,324	8,544 97	141,899	1,885 80	30,239	897 47	13,910	388,163	155,739
Sidings		3,090	3,845 64	11,853	1,768 99	5,468	377 16	1,165	173 49	599	13,048	6,002
Totals.....		198,180		\$5,010,131		\$2,764,600		\$599,443		\$271,145	\$6,399,574	\$3,085,305
Kittitas.....	38.50	90,620	\$76,912 80	\$6,069,838	\$29,611 43	\$2,683,396	\$7,543 21	\$933,596	\$2,904 14	\$263,173	\$7,633,404	\$2,946,561
Main Tract		25,066	15,882 56	385,425	5,922 29	148,399	1,508 65	37,801	580 88	14,553	423,226	182,942
Branch Lines—												
Main Tract		7,041	15,882 56	109,308	5,922 29	41,609	1,508 65	10,623	580 88	4,000	118,380	45,739
Sidings		342	3,845 64	1,315	1,490 97	1,508	377 16	129	145 21	60	1,444	556
Totals.....		123,069		\$7,494,386		\$2,873,982		\$732,118		\$281,893	\$8,197,004	\$3,185,848
Pend Oreille.....	40.60	70,763	\$89,919 48	\$1,904,908	\$10,929 31	\$773,391	\$2,640 12	\$139,823	\$1,071 59	\$75,550	\$2,091,739	\$849,241
Northern Branch		9,385	7,691 28	76,413	3,122 68	51,024	754 32	7,494	308 25	3,043	88,907	34,087
Sidings												
Totals.....		80,668		\$1,981,316		\$804,415		\$194,317		\$78,893	\$2,175,633	\$883,308
Pierce.....	46.60	13,009	\$76,912 80	\$1,000,559	\$85,841 38	\$496,290	\$7,543 21	\$98,129	\$2,515 14	\$45,729	\$1,098,688	\$611,688
Main Tract		42,609	15,882 56	666,436	7,168 27	305,433	1,508 65	64,282	708 08	29,966	719,718	386,386
Grays Harbor B'ch—												
Main Tract		880	26,919 48	23,689	12,544 46	11,089	2,640 12	2,323	1,290 30	1,093	26,012	12,122
Sidings		408	7,691 28	3,138	3,564 14	1,462	754 32	309	361 51	143	3,446	1,605
Totals.....		56,906		\$1,032,322		\$784,194		\$165,042		\$76,909	\$1,847,864	\$851,108

EQUIPMENT (ONLY) OVER FOREIGN LINES.									
Totals.....	Main Line— Main Track.....	\$76,912 80	\$25,082,385	\$10,613,612	\$7,543 21	\$2,555,081	\$1,040,928	\$28,607,446	\$11,654,540
	2nd Main Track.....	22,073 84	45,340	18,000	2,282 96	4,447	1,768	49,787	19,765
	Sidings.....	15,382 56	2,497,686	1,081,248	1,508 66	244,966	106,043	2,742,592	1,187,291
	Idaho & Washington Northern Branch— Main Track.....	26,919 48	1,904,908	773,391	2,640 12	186,823	76,860	2,091,726	849,241
	Sidings.....	7,691 28	76,413	31,024	754 32	7,494	3,043	88,907	34,067
	Everett Branch— Main Track.....	26,919 48	1,478,902	655,766	2,640 12	145,043	64,296	1,623,945	719,361
	Sidings.....	7,691 28	153,083	65,149	754 32	15,009	6,380	168,042	71,539
	Grays Harbor B'ch— Main Track.....	26,919 48	994,588	359,399	2,640 12	87,786	36,249	982,324	394,647
	Sidings.....	7,691 28	129,106	51,513	754 32	12,668	6,062	141,768	56,556
	White River Branch— Main Track.....	19,298 20	308,324	141,829	1,886 80	80,299	13,910	833,568	155,739
	Sidings.....	8,845 64	11,888	5,468	877 16	1,166	586	13,048	6,002
	Comau d'Alene B'ch— Main Track.....	19,298 20	235,788	98,588	1,886 80	23,120	9,179	238,868	102,767
	Sidings.....	8,845 64	13,129	5,212	877 16	1,268	611	14,417	6,723
	Other Branch Lines— Main Track.....	15,382 56	1,696,900	685,178	1,508 66	163,482	67,199	1,880,382	762,377
	Sidings.....	8,845 64	32,715	13,279	377 16	3,209	1,308	36,984	14,962
	Totals.....	.....	\$35,500,975	\$14,568,454	\$9,481,754	.....	\$1,431,252	\$88,682,729	\$16,024,706
	Adams.....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Line.....	40.00	.....	.....	.....	.....	.....	.....	.....
	(Over O.-W. R. R. & N. Co.).....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track.....	19.210	.....	.....	\$7,543 21	\$144,905	\$57,962	\$144,905	\$87,882
	Sidings.....	3.480	.....	.....	1,508 66	5,176	2,070	5,176	2,070
	Totals.....	22.640	.....	.....	.....	\$150,080	\$60,032	\$150,080	\$90,082
	Grays Harbor.....	.....	.....	.....	.....	.....	.....	.....	.....
	(Over O.-W. R. R. & N. Co.).....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track.....	43.000	.....	.....	\$2,640 12	\$118,783	\$43,230	\$118,783	\$43,230
	Sidings.....	1.660	.....	.....	1,131 48	1,887	709	1,887	709
	(Over N. P. Ry. Co.).....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track.....	4.688	.....	.....	2,640 12	12,404	4,718	12,404	4,718
	Sidings.....	1.360	.....	.....	1,131 48	1,887	680	1,887	680
	Totals.....	31.068	.....	.....	.....	10,569	4,012	10,569	4,012
	Totals.....	81.068	.....	.....	.....	\$182,368	\$97,908	\$182,368	\$97,908

EQUIPMENT (ONLY) OVER FOREIGN LINES.

Adams.....	Main Line (Over O-W. R. R. & N. Co.).....	40.00
	Main Track.....	.....
	Sidings.....	.....
	Totals.....	.....
Grays Harbor.....	Grays Harbor B'ch... (Over O-W. R. R. & N. Co.).....	88.00
	Main Track.....	.....
	2nd Main Track.....	.....
	Sidings.....	.....
	(Over N. P. Ry. Co.)	.....
	Main Track.....	.....
	2nd Main Track.....	.....
	Sidings.....	.....
	Totals.....	.....

Snohomish...	Terminals (Over N. P. Ry. Co.) Sidings	41.60	1.241					\$1,108 05	\$1,872	\$327 60	\$779	\$1,872	\$779
Spokane....	Main Line (Over O.-W. R. R. & N. Co.)	39.70	52.590					\$7,543 21	\$396,097	\$2,904 05	\$157,459	\$396,097	\$157,459
	Main Track		1.290					2,292 30	2,919	598 40	1,159	2,919	1,159
	2nd Main Track		8.160					1,508 65	12,311	598 98	4,887	12,311	4,887
	Sidings												
	Terminals— Over N. P. Ry. Co.)		438					1,508 65	729	598 98	299	729	299
	Sidings												
	Totals		62.528						\$412,656		\$108,384	\$412,656	\$108,384
Thurston...	Grays Harbor Rich. (Over O.-W. R. R. & N. Co.)	40.00	1.770					\$2,640 12	\$4,680	\$1,058 05	\$1,848	\$4,680	\$1,848
	Main Track		1.940					704 82	985	801 78	374	985	374
	Sidings												
	Totals		2.990						\$5,565		\$2,222	\$5,565	\$2,222
Whitman...	Main Line (Over O.-W. R. R. & N. Co.)	40.20	1.970					\$7,543 21	\$11,843	\$5,082 37	\$4,761	\$11,843	\$4,761
	Main Track												
	Totals		104.075					\$7,543 21	\$785,080		\$324,800	\$785,080	\$324,800
	Main Track		14.692					2,292 96	33,247	15,110	15,110	33,247	15,110
	2nd Main Track		28.827					1,508 65	43,490	18,721	18,721	43,490	18,721
	Sidings												
	Branch Lines—		77.624					2,640 12	204,937		84,315	204,937	84,315
	Main Track		8.000					1,131 48	3,394	1,299	1,299	3,394	1,299
	2nd Main Track		41.817					754 32	31,543	12,674	12,674	31,543	12,674
	Sidings												
	Totals		270.065						\$1,101,671		\$456,909	\$1,101,671	\$456,909
RECAPITULATION													
Chicago, Milwaukee & St. Paul Ry.—	Track and equipment		880.279						\$3,481,754		\$1,431,292	\$3,481,754	\$1,431,292
	Equipment (only) over foreign lines		270.085						1,101,671		456,909	1,101,671	456,909
	Totals		1,150.314						\$4,583,425		\$1,888,161	\$4,583,425	\$1,888,161

Schedule "C"—Table I.—Steam Railroads—Continued.

GREAT NORTHERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracts				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
Cheban.....	Main Line	40.90	66.601	\$68,856 09	\$5,917,904	\$68,842 14	\$2,420,423	\$8,574 15	\$671,047	\$3,508 88	\$233,558	\$6,488,951	\$2,682,981
	Main Track		41.061	17,771 22	729,704	7,268 43	286,449	1,714 88	70,413	701 37	26,769	800,117	327,248
	Sidings												
	Branch Lines—												
	Main Track		51.426	26,656 83	1,370,864	10,902 64	500,679	2,572 24	132,280	1,022 06	54,103	1,508,134	614,782
Douglas.....	Sidings		4.186	4,442 81	18,563	1,817 11	7,065	428 72	1,794	175 35	734	20,387	8,389
	Totals.....		168.273		\$9,067,055		\$3,287,156		\$775,534		\$317,194	\$9,812,589	\$3,604,350
	Main Line	40.00	15.288	\$68,856 09	\$1,367,318	\$65,542 44	\$546,927	\$8,574 15	\$131,889	\$3,429 06	\$82,776	\$1,499,287	\$599,708
	Main Track		3.585	17,771 22	68,710	7,109 49	25,464	1,714 88	6,149	685 98	2,459	69,868	27,943
	Sidings												
Ferry.....	Branch Lines—		60.889	26,656 83	1,621,775	10,692 73	648,710	2,572 24	156,498	1,028 90	62,587	1,773,268	711,807
	Main Track		5.598	4,442 81	24,871	1,777 12	9,948	428 72	2,400	171 49	960	27,271	10,908
	Sidings												
	Totals.....		86.410		\$8,077,674		\$1,231,096		\$398,980		\$118,792	\$8,476,654	\$1,349,861
	Branch Lines	45.50	68.469	\$68,856 83	\$1,825,966	\$12,128 86	\$380,815	\$2,572 24	\$176,196	\$1,170 37	\$80,160	\$2,002,162	\$710,984
Grant.....	Main Track		19.148	4,442 81	85,071	2,021 48	38,707	428 72	8,200	188 07	3,785	98,280	42,442
	Sidings												
	Totals.....		87.647		\$1,911,087		\$399,522		\$184,405		\$88,904	\$2,095,442	\$908,426
	Main Line	39.50	57.807	\$68,856 09	\$5,136,504	\$65,089 16	\$2,028,919	\$8,574 15	\$495,646	\$3,398 79	\$195,730	\$5,632,150	\$2,224,600
	Main Track		18.258	17,771 22	324,878	7,019 68	128,129	1,714 88	51,301	677 36	12,864	355,679	140,468
King.....	Sidings												
	Totals.....		76.060		\$5,460,882		\$2,157,048		\$656,947		\$208,144	\$6,117,829	\$2,365,192
	Main Line	46.00	45.111	\$68,856 06	\$4,008,387	\$40,873 80	\$1,843,868	\$8,574 15	\$688,788	\$3,944 11	\$177,928	\$4,696,175	\$2,021,781
	Main Track		14.876	36,060 88	888,888	12,262 14	176,721	2,572 24	87,491	1,188 28	17,246	436,014	180,877
	2nd Main Track		54.967	17,771 22	976,668	8,174 76	449,260	1,714 88	64,262	788 82	43,361	1,070,868	492,611

Lincoln.....	Everett & Cherry Valley Branch—	11.752	22,214 02	251,056	10,218 45	120,087	2,143 54	25,191	989 08	11,538	298,250	131,675
	Main Track	2,355	4,442 51	10,463	2,043 69	4,513	628 72	1,010	197 21	464	11,473	5,277
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	138,750	.....	\$5,645,086	.....	\$2,566,739	.....	\$544,722	.....	\$250,572	\$6,189,807	\$2,847,311
Okanogan.....	Main Line	42.30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track	64.600	\$93,856 09	\$5,748,101	\$87,589 13	\$2,431,447	\$9,574 15	\$554,602	\$3,698 57	\$234,622	\$6,302,763	\$2,608,089
	Sidings	14.906	17,771 22	264,893	7,517 23	112,062	1,714 83	25,561	725 37	10,812	250,459	122,864
	Totals.....	79.506	.....	\$6,012,996	.....	\$2,548,499	.....	\$580,223	.....	\$245,434	\$6,568,222	\$2,738,953
Pend Oreille..	Branch Lines	40.20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track	133.048	\$93,656 88	\$3,546,638	\$10,716 05	\$1,425,749	\$2,872 54	\$942,231	\$1,084 04	\$137,577	\$3,593,809	\$1,563,326
	Sidings	17.297	4,442 81	76,847	1,768 01	30,393	628 72	7,416	172 85	2,981	84,263	33,874
	Totals.....	150.345	.....	\$3,623,485	.....	\$1,456,642	.....	\$949,647	.....	\$140,558	\$3,678,132	\$1,597,200
Pierce.....	Main Line	40.60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track	14.765	\$93,856 09	\$1,311,980	\$88,075 57	\$632,656	\$3,574 15	\$126,597	\$3,451 10	\$51,308	\$1,439,877	\$684,054
	Sidings	4.626	17,771 22	82,210	7,215 12	33,377	1,714 88	7,883	698 22	3,221	90,143	36,598
	Totals.....	19.391	.....	\$1,394,170	.....	\$666,033	.....	\$134,580	.....	\$54,519	\$1,529,700	\$720,652
Skagit.....	Main Line	46.60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track	8.267	\$17,771 22	\$57,881	\$3,281 39	\$26,972	\$1,714 88	\$5,585	\$799 11	\$2,006	\$63,466	\$29,575
	Sidings	27.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Snohomish...	Main Line	41.60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track	39.750	\$93,856 09	\$7,974,834	\$85,964 13	\$3,317,531	\$8,574 15	\$709,630	\$3,598 55	\$230,125	\$8,744,394	\$3,637,668
	Sidings	17.080	26,853 83	433,966	11,089 24	158,850	2,572 24	43,805	1,070 05	18,223	284,595	207,073
	Totals.....	55.025	17,771 22	977,861	7,392 83	406,700	1,714 88	94,359	713 37	39,258	1,072,219	446,043
Everett & Cherry Valley Branch—	Main Track	6.182	22,214 02	187,327	9,241 06	57,128	2,143 54	13,251	891 71	5,512	150,578	62,641
	Main Track	1,144	4,442 51	5,068	1,848 21	2,114	628 72	460	178 85	204	5,573	2,515
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	109.181	.....	\$9,549,071	.....	\$6,972,413	.....	\$221,434	.....	\$683,318	\$10,470,506	\$4,365,781

Schedule "C"—Table I.—Steam Railroads—Continued.

GREAT NORTHERN RAILWAY—Continued.

[illegible]

Spokane Falls & Northern Branch—		EQUIPMENT (ONLY) OVER N. P. RY. Trucks between Seattle and Vancouver, Wn.										
	Main Track.....	90,546	31,099 64	2,515,948		929,772	3,000 98	271,725		89,718	3,087,673	1,019,480
	Sidings.....	16,223	8,856 61	144,151		47,432	867 42	13,910		4,577	108,061	92,009
	Other Branch Lines—											
	Main Track.....	414,918	26,656 88	11,060,398		4,250,571	2,572 24	1,067,269		410,157	12,127,687	4,060,728
	Sidings.....	72,666	4,442 51	822,796		120,340	428 72	31,149		11,612	833,945	131,962
	Totals.....	1,400,539		\$92,776,470		\$24,897,943		\$6,067,601		\$2,402,622	\$98,584,071	\$27,300,465
Clarke.....	Main Line.....											
	Main Track.....	17,300		\$8,574 15			\$2,839 49	\$149,333		\$49,898	\$148,333	\$49,898
	2nd Main Track.....	17,299		2,572 24			896 84	44,497		14,995	44,497	14,995
	Sidings.....	6,989		1,714 89			577 90	11,955		4,089	11,955	4,089
	Totals.....	41,588						\$204,815		\$69,022	\$204,815	\$69,022
Cowlitz.....	Main Line.....											
	Main Track.....	40,178		\$8,574 15			\$2,520 80	\$444,462		\$101,251	\$844,492	\$101,251
	2nd Main Track.....	7,434		2,572 24			756 24	106,348		30,384	106,348	30,384
	Sidings.....	7,434		1,714 88			504 16	12,745		3,749	12,745	3,745
	Totals.....	87,700						\$460,588		\$135,413	\$460,588	\$135,413
King.....	Main Line.....											
	Main Track.....	24,094		\$8,574 15			\$3,944 11	\$206,586		\$65,029	\$206,586	\$65,029
	2nd Main Track.....	24,104		2,572 24			1,138 23	62,001		28,821	62,001	28,821
	Sidings.....	3,663		1,714 88			788 82	6,251		2,860	6,251	2,860
	Totals.....	51,861						\$274,868		\$126,459	\$274,868	\$126,459
Lewis.....	Main Line.....											
	Main Track.....	28,432		\$8,574 15			\$3,069 55	\$943,780		\$67,273	\$243,780	\$67,273
	2nd Main Track.....	* 30,872		2,572 24			920 86	79,410		28,429	79,410	28,429
	Sidings.....	29,554		1,714 88			613 91	45,536		16,309	45,536	16,302
	Totals.....	88,858						\$968,726		\$132,004	\$968,726	\$132,004
Pierce.....	Main Line.....											
	Main Track.....	38,889		\$8,574 15			\$3,965 55	\$223,158		\$153,355	\$323,158	\$153,355
	2nd Main Track.....	† 20,859		2,672 24			1,198 66	53,054		25,036	53,054	25,036
	Sidings.....	15,715		1,714 88			739 11	26,949		12,582	26,949	12,589
	Totals.....	74,983						\$409,756		\$190,946	\$409,756	\$190,946

* Includes 2.440 miles of 3rd main track.

† Includes 1.250 miles of 3rd main line track.

† Includes 1.250 miles of 3rd main line track.

Schedule "C"—Table I.—Steam Railroads—Continued.
GREAT NORTHERN RAILWAY—Concluded.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Thurston....	Main Line.....	40.00	24.249					\$8,574.15	\$207,906	\$3,429.66	\$68,162	\$207,906	\$68,162
	Main Track.....		7.088					2,572.24	18,219	1,023.90	7,288	18,219	7,288
	Sidings.....		7.088					1,714.88	12,151	686.68	4,861	12,151	4,861
	Totals.....		38.417						\$228,276		\$65,311	\$228,276	\$65,311
Totals....	Main Line.....		172.641					\$2,574.15	\$1,430,250		\$570,118	\$1,430,250	\$570,118
	Main Track.....		140.386					2,572.24	361,129		134,630	361,129	134,630
	Sidings.....		67.441					1,714.88	115,660		44,397	115,660	44,397
	Totals.....		380.477						\$1,907,029		\$749,135	\$1,907,029	\$749,135
RECAPITULATION													
Track and equipment.....			1,408.553		\$69,776,470				\$6,067,601		\$2,402,622	\$68,884,071	\$27,300,465
Equipment (only) over foreign lines.....			380.477				\$24,397,943		1,907,029		749,135	1,907,029	749,135
Grand Totals.....			1,790.065		\$69,776,470		\$24,397,943		\$8,014,630		\$3,151,657	\$70,791,100	\$28,049,600

LITTLE RIVER RAILROAD & LOGGING COMPANY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
Clallam.....	Main Line Main Track	50.00	7.000	\$6,200 00	\$43,400	\$6,100 00	\$21,700	\$1,800 00	\$12,600	\$600 00	\$6,300	\$56,000	\$28,000

MARYSVILLE & ARLINGTON RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Asst'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Snohomish..	Main Line	41.60	15.000	\$6,000 00	\$120,000	\$6,328 00	\$49,920	\$609 41	\$13,641	\$678 31	\$6,676	\$133,641	\$55,506
	Main Track .....	.....	10.250	1,600 00	16,352	665 60	6,302	151 88	1,889	75 66	773	18,211	7,575
	Totals.....	.....	25.250	.....	\$136,352	.....	\$56,722	.....	\$15,500	.....	\$6,448	\$151,862	\$63,170

MARYSVILLE & NORTHERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mils. actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mils. actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
Snohomish...	Main Line	41.60	7.500	\$6,500 00	\$48,750	\$2,704 00	\$20,250	\$4,228 48	\$31,714	\$1,750 05	\$13,198	\$30,464	\$38,478
	Main Track .....	.....	.250	1,300 00	325	540 80	135	845 70	211	351 81	89	555	223
	Totals.....	.....	7.750	.....	\$49,075	.....	\$20,415	.....	\$31,925	.....	\$13,281	\$31,000	\$38,696

MILWAUKEE TERMINAL RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
Challam.....	1 landing and spur.....	50.00	.110	.....	\$12,806	.....	\$5,408	.....	\$7,213	.....	\$8,607	\$20,019	\$10,010
Jefferson.....	1 landing and spur.....	39.00	.369	.....	20,179	.....	7,870	.....	13,028	.....	5,081	38,207	13,951
King.....	3 landings and spurs.....	46.00	.608	.....	45,510	.....	20,985	.....	27,238	.....	12,527	72,748	33,462
Kitsap.....	2 landings and spurs.....	42.50	.254	.....	26,480	.....	11,254	.....	15,111	.....	6,432	41,691	17,076
Pierce.....	3 landings and spurs.....	46.00	5.363	.....	166,811	.....	77,734	.....	122,908	.....	57,275	289,719	136,009
Whatcom.....	1 landing and spur.....	35.90	.224	.....	15,714	.....	5,641	.....	9,507	.....	3,413	25,221	9,054
	Totals.....	.....	6.958	.....	\$287,500	.....	\$129,837	.....	\$195,000	.....	\$68,825	\$482,500	\$218,162

NORTHERN PACIFIC RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	As'd ratio actual value (Per.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Adams.....	Main Line.....	40.00											
	Main Track.....		97.516	\$82,014 11	\$4,717,124	\$82,806 64	\$1,389,849	\$15,788 04	\$908,065	\$9,815 22	\$903,239	\$5,685,189	\$2,250,075
	Sidings.....		19.438	16,402 82	318,756	6,161 13	127,162	3,157 61	61,892	1,293 04	24,545	380,116	162,047
	Branch Lines—												
	Main Track.....		19.081	24,604 24	494,238	9,841 70	108,694	4,738 41	98,217	1,894 56	37,237	577,453	230,981
Benton.....	Sidings.....		1.801	4,100 70	7,365	1,640 28	2,164	789 40	1,422	315 76	599	8,507	3,623
	Totals.....		98.431		\$5,527,501		\$2,210,999		\$1,064,099		\$425,627	\$9,591,567	\$2,686,626
	Main Line.....	43.00											
	Main Track.....		48.789	\$82,014 11	\$3,557,215	\$85,206 07	\$1,542,503	\$15,788 04	\$930,533	\$9,788 86	\$296,968	\$4,277,763	\$1,889,441
	Sidings.....		12.952	16,402 82	212,449	7,068 21	91,353	3,157 61	40,397	1,867 77	17,586	253,246	106,989
	Branch Lines—												
	Main Track.....		10.645	24,604 24	261,912	10,579 82	112,623	4,738 41	50,419	2,068 69	21,680	312,351	134,302
Clarke.....	Sidings.....		1.429	4,100 70	5,890	1,763 30	2,520	789 40	1,128	339 44	485	6,983	3,016
	Totals.....		68.765		\$4,067,436		\$1,743,986		\$782,997		\$336,659	\$4,850,433	\$2,085,657
	Main Line.....	33.70											
	Main Track.....		17.300	\$82,014 11	\$1,413,844	\$87,638 76	\$478,151	\$15,788 04	\$273,133	\$5,320 57	\$22,046	\$1,691,977	\$570,197
	2nd Main Track.....		17.390	24,604 24	425,629	8,291 63	143,437	4,738 41	81,935	1,896 17	27,612	597,584	171,049
	Sidings.....		7.994	16,402 82	181,124	5,827 76	44,189	3,157 61	26,242	1,064 11	8,566	156,366	62,686
	Branch Lines—												
Columbia...	Main Track.....		27.249	24,604 24	670,441	8,291 63	295,989	4,738 41	129,033	1,896 17	43,494	799,504	299,433
	Sidings.....		3.869	4,100 70	15,866	1,361 94	6,347	789 40	3,054	260 08	1,029	13,920	6,576
	Totals.....		73.711		\$2,691,904		\$397,063		\$512,427		\$172,687	\$2,174,381	\$1,099,750
	Dayton Branch.....	36.60											
	Main Track.....		8.183	\$82,014 11	\$294,898	\$10,477 30	\$65,736	\$5,320 57	\$45,218	\$2,016 92	\$16,504	\$269,111	\$102,240
	Sidings.....		2.456	8,201 41	20,199	2,963 51	7,856	1,579 80	3,861	576 35	1,416	24,040	9,774
	Totals.....		10.641		\$265,092		\$73,594		\$49,099		\$17,920	\$294,151	\$111,014

Schedule "C"—Table I.—Steam Railroads—Continued.

NORTHERN PACIFIC RAILWAY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Cowlitz.....	Main Line.....	29.40											
	Main Track.....		40.178	\$82,014 11	\$8,295,163	\$24,112 15	\$608,778	\$15,788 04	\$684,882	\$4,641 66	\$189,408	\$3,929,495	\$1,155,271
	2nd Main Track.....		40.178	24,604 24	988,049	7,233 65	280,631	4,786 41	180,800	1,862 51	65,945	1,178,849	346,522
	Sidings.....		8.300	16,402 82	180,143	4,822 43	40,026	3,157 61	26,208	928 34	7,705	162,851	47,731
	Totals.....		88.656		\$4,419,855		\$1,299,438		\$860,840		\$250,146	\$5,270,685	\$1,549,584
Franklin.....	Main Line.....	43.00											
	Main Track.....		42.671	\$82,014 11	\$3,469,024	\$35,266 07	\$1,504,538	\$15,788 04	\$673,691	\$6,788 86	\$269,087	\$4,173,315	\$1,794,525
	Sidings.....		42.140	16,402 82	691,215	7,058 21	297,222	3,157 61	133,002	1,357 77	57,216	824,277	354,438
	Wallula Branch—												
	Main Track.....		1.781	28,704 04	51,123	12,343 12	21,993	5,525 81	9,842	2,376 10	4,232	60,965	26,215
	Sidings.....		.011	8,201 41	90	3,596 61	39	1,578 80	17	678 88	7	107	46
	Other Branch Lines—												
	Main Track.....		41.506	24,604 24	1,021,224	10,579 82	439,126	4,786 41	196,500	2,086 06	84,534	1,217,814	523,680
	Sidings.....		4.286	4,100 70	17,576	1,768 30	7,558	789 40	3,363	339 44	1,455	20,969	9,013
	Totals.....		182.395		\$5,280,862		\$2,270,706		\$1,016,585		\$437,131	\$6,297,437	\$2,707,897
Grant.....	Washington Cen. B'ch.	89.50											
	Main Track.....		19.153	\$28,704 04	\$549,756	\$11,388 45	\$217,165	\$5,855 81	\$105,836	\$2,182 80	\$41,905	\$655,622	\$258,970
	Sidings.....		2.776	8,201 41	28,767	3,280 56	8,968	1,578 80	4,389	623 68	1,731	27,150	10,724
	Other Branch Lines—												
	Main Track.....		66.185	24,604 24	1,628,482	9,718 67	642,200	4,786 41	313,478	1,870 88	123,824	1,941,911	767,054
	Sidings.....		4.363	4,100 70	17,850	1,619 78	7,051	789 40	3,456	311 51	1,367	21,286	8,406
	Totals.....		92.467		\$2,218,865		\$576,489		\$427,134		\$168,717	\$2,645,969	\$1,045,156
Grays Harbor	Grays Harbor B'ch.	38.00											
	Main Track.....		41.164	\$82,805 65	\$1,850,412	\$12,466 15	\$513,157	\$6,315 21	\$250,959	\$2,399 76	\$98,785	\$1,610,371	\$611,942
	2nd Main Track.....		1.350	16,402 82	23,144	6,263 07	8,415	3,157 61	4,263	1,199 89	420	26,407	10,085
	Sidings.....		20.091	8,201 41	164,774	3,116 54	69,614	1,578 80	31,720	669 94	12,069	198,494	74,667
	Other Branch Lines—												
	Main Track.....		57.603	24,604 24	1,417,278	9,349 61	538,908	4,786 41	272,882	1,790 84	108,676	1,690,110	642,242
	Sidings.....		12.166	4,100 70	40,866	1,568 27	18,966	789 40	9,498	259 97	8,048	50,488	22,603
	Totals.....		132.373		\$3,004,468		\$1,141,708		\$678,377		\$219,783	\$3,682,870	\$1,391,491

King.....	Main Line.....	46.00	111.068	\$22,014 11	\$9,108,323	\$67,726 49	\$4,129,329	\$15,788 04	\$1,738,898	\$7,968 50	\$608,839	\$10,881,711	\$4,996,988
	Main Tract.....		37,765	24,604 24	4,928,988	11,317 96	427,339	4,736 41	473,823	2,178 76	82,259	1,107,766	609,668
	2nd Main Tract.....		149,814	16,402 82	2,497,872	7,545 80	1,130,362	3,157 61	173,064	1,462 50	217,605	2,980,635	1,347,997
	Buckley Branch—												
	Main Tract.....		12,298	28,704 94	851,291	13,924 27	161,504	5,825 81	67,695	2,541 87	31,107	418,916	192,701
Kittitas.....	Sidings.....		8,782	8,201 41	72,025	3,772 66	33,131	1,578 80	13,865	736 25	6,878	86,980	39,509
	Other Branch Lines—												
	Main Tract.....		79,391	24,604 24	1,053,885	11,317 96	896,543	4,736 41	876,028	2,178 76	172,973	2,329,383	1,071,516
	Sidings.....		20,233	4,100 70	88,175	1,886 82	33,290	789 40	16,011	368 12	7,865	90,186	45,635
	Totals.....		419,321		\$14,954,474		\$6,879,066		\$2,878,794		\$1,324,246	\$17,883,268	\$8,206,304
Lewis.....	Main Line.....	38.50	73,174	\$22,014 11	\$6,001,301	\$31,575 43	\$2,310,501	\$15,788 04	\$1,155,274	\$9,078 40	\$944,731	\$7,156,575	\$2,755,288
	Main Tract.....		60,401	24,604 24	208,182	9,472 63	40,139	4,736 41	40,070	1,833 52	15,437	248,232	96,535
	2nd Main Tract.....		60,401	16,402 82	900,747	6,315 09	381,438	3,157 61	190,728	1,215 68	73,499	1,181,470	454,386
	Branch Lines—												
	Main Tract.....		7,180	24,604 24	176,658	9,472 63	68,013	4,736 41	34,007	1,833 52	13,038	210,665	81,105
Lincoln.....	Sidings.....		9,246	4,100 70	37,915	1,578 77	14,597	789 40	7,299	308 92	2,810	45,214	17,407
	Totals.....		168,461		\$7,414,773		\$2,854,687		\$1,427,373		\$649,539	\$8,842,146	\$3,404,236
	Main Line.....	35.50	28,426	\$22,014 11	\$2,331,925	\$29,351 05	\$324,738	\$15,788 04	\$448,998	\$5,652 12	\$160,701	\$2,730,711	\$935,494
	Main Tract.....		* 30,372	24,604 24	739,532	8,308 32	271,460	4,736 41	148,292	1,465 63	52,347	305,804	324,277
	Sidings.....		28,295	16,402 82	463,970	5,872 21	166,101	3,157 61	89,316	1,130 42	31,975	553,585	136,076
.....	Grays Harbor Bch—												
	Main Tract.....		4,000	32,305 65	181,223	11,744 42	46,978	6,315 21	25,261	2,260 85	9,043	136,464	56,021
	Sidings.....		2,080	8,201 41	16,649	2,686 10	5,960	1,578 80	3,205	555 21	1,147	19,854	7,107
	South Bend Branch—												
	Main Tract.....		26,184	28,704 94	751,610	10,276 37	299,076	5,825 81	144,688	1,978 24	51,798	884,298	320,874
.....	Sidings.....		6,231	8,201 41	51,108	2,686 10	18,296	1,578 80	9,887	565 21	3,822	60,948	21,817
	Totals.....		129,085		\$4,805,942		\$1,613,133		\$937,415		\$310,538	\$5,373,377	\$1,923,696
	Main Line.....	42.30	16,022	\$22,014 11	\$1,303,239	\$34,691 97	\$576,650	\$15,788 04	\$923,429	\$9,678 34	\$111,007	\$1,625,638	\$637,657
	Main Tract.....		6,090	16,402 82	99,401	6,088 39	42,047	3,157 61	19,135	1,335 67	8,094	118,536	50,141
	Washington Central Branch—												
.....	Main Tract.....		66,075	28,704 94	1,595,679	12,142 19	802,296	5,825 81	395,118	2,337 77	154,445	2,331,797	956,740
	Sidings.....		6,608	8,201 41	54,154	3,469 30	22,907	1,578 80	10,425	687 38	4,410	64,679	27,317
	Other Branch Lines—												
	Main Tract.....		17,924	24,604 24	441,006	10,407 59	196,546	4,736 41	84,965	2,008 50	35,911	555,901	222,457
	Sidings.....		1,865	4,100 70	8,551	1,734 00	1,502	789 40	684	333 92	299	4,285	1,791
.....	Totals.....		114,180		\$3,368,080		\$1,681,947		\$742,686		\$314,159	\$4,400,716	\$1,946,108

* Includes 2.440 3rd main track.

Schedule "C"—Table I.—Steam Railroads—Continued.

NORTHERN PACIFIC RAILWAY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Mason	Branch Lines	37.00	.825	\$24,604 24	\$20,269	\$9,108 57	\$7,510	\$4,738 41	\$8,908	\$1,792 47	\$1,446	\$24,307	\$8,953
	Main Track	.....	.090	4,100 70	399	1,517 26	137	789 40	71	292 06	26	440	168
	Sidings	.....	.915	.....	\$20,668	.....	\$7,647	.....	\$8,979	.....	\$1,472	\$24,647	\$9,119
Totals				.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pacific	South Bend Branch	37.50	30.468	\$23,704 04	\$976,300	\$10,764 85	\$639,237	\$5,625 81	\$168,468	\$2,072 18	\$93,137	\$1,043,708	\$391,424
	Main Track	.....	8.659	8,301 41	71,016	3,076 53	26,031	1,578 80	13,071	599 05	5,137	84,697	31,769
	Sidings	.....	75.089	.....	\$946,316	.....	\$354,898	.....	\$152,169	.....	\$68,314	\$1,198,495	\$423,182
Totals				.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pierce	Main Line	40.60	42.416	\$32,014 11	\$8,473,710	\$68,213 58	\$1,621,079	\$15,738 04	\$699,695	\$7,357 23	\$312,064	\$4,148,375	\$1,983,143
	Main Track	.....	41.836	24,604 24	1,031,992	11,466 58	476,234	4,738 41	193,732	2,307 17	91,877	1,318,694	567,911
	Sidings	.....	75.089	16,402 82	1,343,074	7,648 71	551,002	3,157 61	240,239	1,471 45	111,861	1,488,383	686,568
	Prarie Line Bch—	.....	22.880	32,305 65	732,550	15,287 48	341,368	6,315 21	141,019	2,942 89	65,715	873,589	407,088
	Main Track	.....	4.313	16,402 82	79,860	7,648 71	36,732	3,157 61	15,194	1,471 45	7,061	94,124	45,853
	Sidings	.....	33.066	8,301 41	270,584	3,821 86	136,256	1,678 50	52,165	735 72	24,305	823,069	150,560
	Buckley Branch—	.....	21.308	28,704 04	611,646	13,376 50	295,036	5,925 81	117,744	2,973 08	54,389	739,339	339,866
	Main Track	.....	1.893	16,402 82	25,063	7,648 71	11,680	3,157 61	4,856	1,471 45	2,249	29,888	13,958
	Sidings	.....	6.827	8,301 41	51,890	3,821 86	24,151	1,678 50	9,989	735 72	4,065	61,579	28,686
	Olympia Branch—	.....	11.403	28,704 04	329,016	13,376 50	153,321	5,925 81	63,397	2,973 08	29,515	392,835	182,880
	Main Track	.....	8.583	8,301 41	69,593	3,821 86	38,612	1,678 50	13,473	735 72	6,278	88,455	38,860
	Sidings	.....	26.083	24,604 24	389,940	11,466 58	413,128	4,738 41	170,682	2,307 17	79,329	1,067,302	492,667
	Other Branch Lines—	.....	8.231	4,100 70	38,738	1,910 98	15,729	789 40	6,498	367 86	3,028	40,251	18,757
	Main Track	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Sidings	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals				.....	\$8,889,050	.....	\$4,118,097	.....	\$1,701,651	.....	\$792,925	\$10,540,901	\$4,911,923

Stagitt.....	Main Line	27.00	922,014 11	92,405,140	924,117 87	\$15,788 04	\$403,000	\$1,302 77	\$125,010	\$2,809 146	\$774,309
	Main Track		16,402 82	237,103	4,225 76	3,157 61	45,643	888 55	12,334	232,746	79,842
	Sidings										
Snobomish....	Totals			\$2,642,240		\$713,407	\$508,643		\$137,384	\$3,150,802	\$350,741
	Main Line	41.60	922,014 11	92,405,140	924,117 87	\$15,788 04	\$742,333	\$1,302 77	\$125,010	\$2,809 146	\$774,309
	Main Track		16,402 82	237,103	4,225 76	3,157 61	45,643	888 55	12,334	232,746	79,842
Spokane.....	Sidings										
	Everett Branch—										
	Main Track		28,704 94	328,461	11,941 26	5,325 81	62,846	2,393 74	26,144	309,308	161,932
Thurston.....	Sidings		13,440	8,301 41	110,227	3,111 79	1,978 80	603 78	8,827	131,446	54,681
	Other Branch Lines—										
	Main Track		24,604 24	1,727,006	10,235 36	4,799 40	322,472	1,970 35	138,300	2,069,557	856,780
Totals	Sidings		4,100 70	39,009	1,705 39	789 40	47,234	828 39	3,172	47,234	19,049
	Totals			\$2,303,008		\$2,624,380	\$1,214,432		\$606,204	\$7,623,040	\$3,129,584
Totals	Main Line	39.70	48,775	\$4,000,238	\$32,539 60	\$15,788 04	\$770,003	\$1,302 77	\$125,010	\$2,809 146	\$774,309
	Main Track		20,909	24,604 24	615,095	9,767 85	99,318	1,880 35	29,429	615,244	244,232
	Sidings		61,749	1,012,968	6,511 92	3,157 61	194,979	1,233 57	77,407	1,207,827	479,513
Totals	Palouse & Lewiston										
	Branch—										
	Main Track		25,233	32,805 65	13,023 84	6,315 21	159,334	2,307 14	65,276	327,333	391,971
Totals	Sidings		3,864	8,301 41	31,990	1,578 80	6,101	696 78	2,432	37,791	15,008
	Washington Con. B'ch—										
	Main Track		23,676	29,704 94	679,613	11,305 86	130,829	2,198 75	51,089	510,447	321,747
Totals	Sidings		2,645	8,301 41	21,008	3,255 96	4,176	696 78	1,058	25,869	10,270
	Other Branch Lines—										
	Sidings		212	4,100 70	390	1,627 95	147	313 29	65	1,065	411
Totals	Totals		137,123	\$7,000,341		\$2,315,054	\$1,305,016		\$541,910	\$3,455,587	\$3,356,974
Totals	Main Line	40.00	25,159	\$2,005,541	\$32,539 60	\$15,788 04	\$327,635	\$1,302 77	\$125,010	\$2,809 146	\$774,309
	Main Track		25,159	24,604 24	615,095	9,767 85	99,318	1,880 35	29,429	615,244	244,232
	Sidings		7,034	110,227	3,111 79	1,978 80	603 78	8,827	138,300	2,069,557	856,780
Totals	Prairie Line Branch—										
	Main Track		17,165	523,103	13,123 26	6,315 21	198,400	2,393 74	43,800	671,500	298,604
	Sidings		5,800	8,301 41	45,000	1,578 80	9,222	681 82	3,701	57,312	21,625
Totals	Grays Harbor B'ch—										
	Main Track		10,134	322,124	13,123 26	6,315 21	63,955	2,393 74	25,574	336,039	153,434
	Sidings		3,004	25,129	3,950 55	1,578 80	4,867	681 82	29,906	29,906	11,987
Totals	Olympia Branch—										
	Main Track		28,432	516,718	11,451 98	5,325 81	197,230	2,210 32	62,833	973,933	399,578
	Sidings		11,564	94,941	3,250 56	1,578 80	18,257	681 82	7,303	113,008	45,259
Totals	Totals		133,641	\$4,680,905		\$1,373,339	\$901,102		\$380,441	\$5,632,004	\$2,225,327

† Includes 1.250 3rd main track.

Schedule "C"—Table I.—Steam Railroads—Continued.
NORTHERN PACIFIC RAILWAY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY			PERSONAL PROPERTY			TOTAL VALUATION	
			Mileage	Ratio per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per actual value	Actual value	Equalized value
Walla Walla.	Walla Branch	42.60								
	Main Track		11.605	\$28,704.94	\$833,121	\$12,056.07	\$139,911	\$5,525.81	\$94,127	\$26,939
	Sidings		2.803	8,201.41	22,989	3,444.50	9,655	1,578.80	4,426	683.10
	Dayton Branch—									
	Main Track		78.014	28,704.94	2,239,357	12,056.07	940,542	5,525.81	431,040	181,058
	Sidings		13.515	8,201.41	110,842	3,444.50	46,554	1,578.80	21,357	683.10
Whatecom....	Other Branch Lines—									
	Main Track		39.531	24,004.24	898,818	10,333.78	377,543	4,736.41	173,029	1,989.29
	Sidings		3.010	4,100.70	12,343	1,722.29	5,184	789.40	2,376	331.55
	Totals.		145.478		\$3,617,500		\$1,519,349		\$906,382	\$292,481
Whitman....	Main Line	35.00								
	Main Track		28.950	\$82,014.11	\$2,374,308	\$99,443.07	\$832,377	\$15,788.04	\$457,064	\$5,697.91
	Sidings		7.834	16,402.82	128,500	5,888.61	46,131	3,137.61	24,737	1,133.58
	Bellingham Branch—									
	Main Track		22.748	28,704.94	632,680	10,305.07	234,420	5,595.81	125,701	1,983.77
	Sidings		6.568	8,201.41	53,867	2,944.31	19,358	1,578.80	10,370	566.79
Whitman....	Totals.		66.100		\$3,209,655		\$1,132,266		\$617,872	\$221,816
	Palouse & Lewiston Branch	40.30								
	Main Track		58.993	\$82,805.65	\$1,635,304	\$13,187.87	\$777,992	\$9,315.21	\$672,553	\$2,638.71
	Sidings		10.298	8,201.41	84,212	3,296.97	33,853	1,578.80	16,211	634.08
	Other Branch Lines—									
	Main Track		24.230	24,004.24	843,679	9,890.00	339,159	4,736.41	162,412	1,904.04
Yakima.....	Sidings		3.891	4,100.70	15,956	1,648.48	6,414	789.40	3,972	317.34
	Totals.		107.442		\$2,879,151		\$1,157,418		\$554,248	\$222,808
	Main Line	46.00								
	Main Track		55.612	\$82,014.11	\$1,500,909	\$57,736.49	\$2,048,046	\$15,788.04	\$878,004	\$7,293.20
	Sidings		36.050	16,402.82	501,322	7,545.29	272,038	3,167.61	113,832	1,651.50

Schedule "C"—Table I.—Steam Railroads—Continued.
NORTHERN PACIFIC RAILWAY—Concluded.

COUNTIES	CLASSIFICATION OF TRACK	Am'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
				Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value			
EQUIPMENT (ONLY) OVER FOREIGN LINES.														
Franklin.....	Branch Line	43.00												
	(Over S. P. & S.)		24.888											
	Main Track		4.374										\$117,643	\$60,587
	Sidings												3,458	1,485
	Totals.....		39.212										\$121,006	\$62,072
Grays Harbor.....	Branch Line	38.00												
	(Over O.-W. R. R. & N. Co.)		1.680											
	Main Track		1.660										\$7,720	\$2,984
	2nd Main Track		4.160										2,605	990
	Sidings												3,294	1,248
	Totals.....		7.440										\$13,609	\$5,172
Lewis.....	Branch Line	35.80												
	(Over O.-W. R. R. & N. Co.)		1.420											
	Main Track												\$6,726	\$2,408
Suohomish.....	Main Line	41.60												
	(Over G. N. Ry.)		11.572										\$122,699	\$76,008
	Main Track		.765										2,384	922
	Sidings													
	Totals.....		12.327										\$125,083	\$76,936
Whitman.....	Branch Lines	40.20												
	(Over O.-W. R. R. & N. Co.)		70.800											
	Main Track		9.070										\$388,917	\$134,235
	Sidings												7,100	2,878
	Totals.....		79.870										\$391,077	\$137,113

[illegible]

OREGON TRUNK RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalised value
Wickitlat.....	Main Line	40.00	730	\$43,599 71	\$61,823	\$17,439 88	\$12,731	\$1,839 69	\$1,198	\$23,000	\$19,186		
	Main Track		10,240	8,719 97	89,292	8,487 90	35,717	311 74	3,192	92,494	36,994		
	Sidings												
	Totals.....	.....	10,970	.....	\$121,120	.....	\$48,449	.....	\$4,330	\$125,459	\$50,180		

Schedule "C"—Table I.—Steam Railroads—Continued.

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
Adams.....	Main Line	40.00	41.150	\$83,708 98	\$3,447,000	\$83,597 67	\$1,378,887	\$4,776 67	\$196,500	\$1,910 67	\$78,624	\$3,043,661	\$1,457,461
	Main Track		8.010	16,753 79	134,198	6,701 52	53,679	955 33	7,662	382 13	3,061	141,850	56,740
	Branch Lines—												
	Sidings		9.300	25,130 68	233,715	10,652 27	98,486	1,483 00	13,327	573 30	5,331	247,043	98,817
	Totals.....		.720	4,133 40	6,616	1,675 38	1,206	288 68	172	50 53	69	3,188	1,275
			50.180		\$3,818,020		\$1,527,206		\$217,711		\$87,085	\$4,035,731	\$1,614,238
Benton.....	Yakima Branch	43.00	48.680	\$33,507 57	\$1,630,473	\$14,408 26	\$701,106	\$1,910 67	\$92,973	\$821 59	\$39,579	\$1,723,451	\$741,085
	Main Track		8.280	8,376 90	69,361	3,602 07	29,825	477 67	3,955	205 40	1,701	73,316	31,288
	Sidings												
	Totals.....		56.940		\$1,699,839		\$730,931		\$98,928		\$41,680	\$1,798,767	\$772,611
Clarke.....	Main Line	33.70	.520	\$16,768 79	\$8,712	\$5,646 03	\$2,386	\$955 33	\$497	\$321 95	\$167	\$9,309	\$3,108
	Sidings												
Columbia.....	Main Line	36.50	8.680	\$33,768 63	\$722,926	\$30,575 66	\$238,868	\$4,776 67	\$41,223	\$1,743 48	\$15,046	\$764,149	\$278,914
	Main Track		2.620	16,758 79	43,866	6,115 13	16,022	956 33	2,508	349 70	914	46,368	16,866
	Sidings												
	Pendleton-Grange												
	City Branch—												
	Main Track		24.380	54,449 81	1,824,764	19,374 18	488,539	3,104 83	75,541	1,133 26	27,572	1,400,305	511,111
	Sidings		3.940	16,758 79	66,010	6,115 13	24,094	956 33	8,764	349 70	1,374	69,774	25,468
	Dayton Branch—												
	Main Track		19.670	33,507 57	659,094	12,230 26	340,509	1,910 67	37,688	997 39	13,718	686,677	254,237
	Sidings		4.130	8,376 90	34,597	3,067 07	12,628	477 67	1,973	174 36	720	36,570	13,348
	Pomeroy Branch—												
	Main Track		13.260	33,507 57	407,431	12,230 26	170,612	1,910 67	26,564	997 39	9,729	404,086	160,541
	Sidings		.740	8,376 90	6,199	3,067 07	2,263	477 67	358	174 36	129	6,086	2,392
	Totals.....		78.010		\$3,364,916		\$1,213,506		\$139,504		\$50,302	\$3,514,510	\$1,286,797

Franklin.....	43.00	Main Line	7.160	\$98,708 98	\$509,738	\$98,080 64	\$257,908	\$4,778 87	\$84,201	\$2,088 97	\$14,708	\$983,987	\$272,614	
		Main Track	.770	16,768 79	12,960	7,204 13	5,157	965 88	783	410 79	316	13,088	5,888	
		Sidings												
		Branch Lines—												
		Main Track	23.620	25,130 68	719,240	10,808 19	309,273	1,483 00	41,013	616 19	17,685	790,283	338,908	
		Sidings	1.700	4,188 46	7,129	1,801 04	3,062	238 88	406	102 70	175	7,026	3,257	
		Totals.....	38.220		\$1,339,046		\$575,790		\$76,365		\$82,882	\$1,415,401	\$608,622	
Garfield.....	34.80	Pomeroy Branch												
		Main Track	16.060	\$83,507 57	\$537,799	\$11,600 68	\$187,153	\$1,910 67	\$80,666	\$64 91	\$10,672	\$686,462	\$197,825	
		Sidings	2.170	8,376 90	18,178	2,915 16	6,336	477 67	1,087	166 23	361	19,215	6,087	
		Totals.....	18.230		\$556,974		\$198,479		\$81,768		\$11,053	\$687,677	\$204,512	
		Grays Harbor Branch.												
Grays Harbor.....	38.00	Main Track	41.490	\$98,607 57	\$1,889,894	\$12,732 88	\$338,100	\$1,910 67	\$79,255	\$736 05	\$30,117	\$1,469,149	\$558,277	
		2nd Main Track	1.650	16,763 89	27,644	6,366 44	10,505	965 88	1,576	383 08	540	29,890	11,104	
		Sidings	14.880	8,376 90	124,046	3,183 22	47,366	477 67	7,108	181 51	2,701	131,766	50,067	
		Other Branch Lines—												
		Main Track	13.660	25,130 68	343,064	9,549 61	130,368	1,483 00	19,560	544 54	7,438	362,584	137,736	
		Sidings	2.180	4,188 46	9,131	1,991 61	3,470	238 88	621	90 76	186	9,662	3,068	
		Totals.....	73.840		\$1,894,351		\$719,864		\$108,020		\$41,048	\$2,002,871	\$760,902	
King.....	46.00	Main Line	9.460	\$98,708 98	\$789,108	\$98,883 71	\$392,989	\$4,776 87	\$44,966	\$2,197 27	\$30,698	\$834,030	\$388,696	
		Main Track	3.870	25,130 68	97,256	11,600 11	5,446	1,483 00	6,540	669 18	2,581	102,892	47,239	
		Sidings	31.120	16,763 89	621,578	7,706 74	239,884	965 88	29,730	439 45	13,676	561,106	233,510	
		Totals.....	44.410		\$1,407,787		\$647,560		\$90,272		\$96,925	\$1,468,009	\$624,489	
		Lewis.....												
Lewis.....	35.80	Main Line	.000	\$16,763 79	\$1,508	\$5,997 86	\$540	\$655 38	\$86	\$342 01	\$31	\$1,594	\$511	
		Sidings												
		Grays Harbor Branch—												
		Main Track	5.640	33,507 57	188,988	11,905 71	67,656	1,910 67	10,776	684 02	3,888	199,759	71,514	
		Sidings	2.060	8,376 90	17,173	2,948 86	6,146	477 67	979	171 01	381	16,182	6,489	
		Other Branch Lines—												
		Main Track	2.000	25,130 68	50,261	8,908 78	17,694	1,483 00	2,868	513 01	1,026	53,127	19,020	
		Sidings	.620	4,188 46	2,997	1,469 47	930	238 88	146	85 50	68	2,745	983	
		Totals.....	10.400		\$280,322		\$93,298		\$14,866		\$5,319	\$275,877	\$98,587	
Lincoln.....	42.30	Main Line	7.000	\$98,708 98	\$696,388	\$85,484 26	\$248,040	\$4,778 87	\$83,487	\$2,020 58	\$14,144	\$919,880	\$392,184	
		Main Track	1.350	16,763 79	22,617	7,080 86	9,587	965 38	1,290	404 10	546	23,907	10,113	
		Sidings												
		Totals.....	8.350		\$909,000		\$257,007					\$14,690	\$943,787	\$272,297

Schedule "C"—Table I.—Steam Railroads—Continued.

COUNTIES	CLASSIFICATION OF TRACT	Ass'd ratio to actual value (Pct.)	REAL PROPERTY: Right-of-Way and Tracks				PERSONAL PROPERTY: Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value
Pacific.....	Branch Lines.....	37.50										
	Main Tract.....	28.660	\$25,130.68	\$719,394	\$9,424.01	\$999,998	\$1,438.00	\$41,055	\$337.38	\$15,306	\$761,049	\$235,394
	Sidings.....	3.100	4,138.46	12,984	1,570.67	4,899	239.82	740	89.56	278	13,724	5,147
	Totals.....	\$1,750		\$732,978		\$274,867					\$774,778	\$250,541
Pierce.....	Main Line.....	46.60										
	Main Tract.....	2.500	\$28,703.96	\$216,922	\$99,089.32	\$101,104	\$4,776.67	\$13,371	\$2,235.92	\$5,705	\$229,332	\$106,869
	Sidings.....	8.200	16,738.79	187,716	7,307.27	64,176	959.33	7,533	445.18	3,699	145,669	67,885
	Totals.....	10.810		\$354,678		\$165,280					\$374,002	\$174,704
Spokane.....	Main Line.....	39.70										
	Main Tract.....	23.000	\$38,768.98	\$2,763,563	\$33,353.37	\$1,069,120	\$4,776.67	\$137,899	\$1,390.34	\$32,674	\$2,925,438	\$1,161,794
	Sidings.....	1.800	25,130.68	39,768	9,976.85	15,763	1,438.00	2,234	669.50	869	41,970	12,652
	Coalfax Branch—	8.900	16,768.79	149,109	6,651.36	69,166	955.33	3,502	379.27	3,376	137,611	62,672
	Main Tract.....	44.800	62,865.70	2,816,321	24,942.30	1,119,159	3,382.50	160,003	1,422.25	63,789	2,977,124	1,151,918
	Sidings.....	15.700	16,768.79	314,301	6,651.36	134,778	955.33	17,622	379.27	7,115	352,323	131,868
	Other Branch Lines—	4.100	25,130.68	108,086	9,976.85	40,905	1,438.00	5,975	569.50	2,822	103,911	43,237
	Main Tract.....	.250	4,138.46	1,173	1,622.52	466	239.82	740	89.56	266	1,240	48,237
	Sidings.....											
	Totals.....	111.500		\$5,192,409		\$2,458,387					\$5,650,811	\$2,598,599
Thurston.....	Main Line.....	40.00										
	Sidings.....	.300	\$16,738.79	\$5,864	\$5,701.82	\$2,346	\$955.33	\$324	\$338.12	\$134	\$6,198	\$2,480
	Grays Harbor Beh—	7.510	32,507.57	244,940	12,408.06	97,976	1,910.67	13,397	764.27	5,657	239,007	103,368
	Main Tract.....	1.780	9,276.90	14,462	3,380.79	5,797	477.67	689	191.07	331	15,318	6,123
	Sidings.....											
	Other Branch Lines—	11.400	25,130.68	289,732	10,052.27	115,501	1,438.00	16,465	573.20	6,396	305,217	132,057
	Main Tract.....	4.940	4,138.46	20,273	1,673.36	8,109	239.82	1,135	98.33	462	21,428	8,671
Totals.....	25.730		\$374,380		\$239,739					\$397,098	\$243,809	

Schedule "C"—Table I.—Steam Railroads—Continued.
OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
				Rate per mile actual value	Actual value	Equalized rate per mile	Equalized rate per mile	Actual value	Equalized value	Actual value	Equalized value
Totals....	Main Line—										
	Main Track.....		188.880	\$63,768.88	\$15,398,405			\$678,047		\$16,276,492	\$6,694,570
	2nd Main Track.....		6.460	25,130.68	136,862			7,810		144,772	68,961
	Sidings.....		71.700	16,758.79	1,501,547			68,497		1,590,744	532,064
	Coffax Branch—										
	Main Track.....		167.130	62,896.70	9,871,969			562,918		10,434,877	4,130,466
	Sidings.....		34.450	16,758.79	577,168			32,911		610,079	244,002
	Pendleton-Grange										
	City Branch—										
	Main Track.....		56.660	54,449.81	3,064,562			175,889		3,230,471	1,292,380
	Sidings.....		14.460	16,758.79	242,762			13,943		256,605	103,967
	Lewiston Branch—										
	Main Track.....		70.500	37,696.02	2,657,569			151,540		2,809,109	1,129,262
	Sidings.....		9.070	8,376.90	76,978			4,333		80,311	32,265
	Pleasant Valley B'ch—										
	Main Track.....		47.840	37,696.02	1,833,378			102,882		1,936,210	766,297
	Sidings.....		6.540	8,376.90	54,785			3,124		57,909	23,280
	Yakima Branch—										
	Main Track.....		98.070	33,507.57	3,295,087			187,379		3,482,466	1,536,212
	Sidings.....		26.230	8,376.90	221,549			12,062		233,401	99,962
	Dayton Branch—										
	Main Track.....		25.060	33,507.57	839,700			47,982		887,682	384,466
	Sidings.....		4.730	8,376.90	39,623			2,259		41,882	15,579
	Pomeroy Branch—										
	Main Track.....		30.000	36,507.57	1,005,227			57,320		1,062,547	378,166
	Sidings.....		2.910	8,376.90	24,377			1,360		25,767	9,079
	Grays Harbor B'ch—										
	Main Track.....		54.430	33,507.57	1,823,817			108,938		1,932,815	738,364
	2nd Main Track.....		1.660	16,758.79	27,644			1,669		29,220	11,104
	Sidings.....		13.660	8,376.90	156,313			8,913		165,226	62,694
	Other Branch Lines—										
	Main Track.....		175.100	25,130.68	4,400,862			250,918		4,651,800	1,877,671
	Sidings.....		22.740	4,188.46	95,246			6,431		100,677	40,447
	Totals.....		1,116.220		\$47,014,860	\$19,101,026		\$2,680,862		\$49,695,722	\$20,190,208

Schedule "C"—Table I.—Steam Railroads—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Aus'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
Pierce.....	Main Line (Over O. M. & St. P. Ry.)	40.00						\$4,776 67	\$22,304	\$2,295 92	\$24,374	\$22,304	\$24,374
	Main Track	10.960						905 32	4,950	445 12	1,904	4,350	1,904
	Sidings	4.450											
	Over N. P. Ry.)												
	Main Track	26.990						4,776 67	123,688	2,295 92	59,923	123,688	59,922
	2nd Main Track	26.690						1,433 00	88,146	697 78	17,776	88,146	17,776
	Sidings	9.160						905 32	8,751	445 12	4,078	8,751	4,078
	Totals.							\$232,069	.....	\$108,144	\$232,069	\$108,144	
Spokane....	Main Line (Over O. M. & St. P. Ry.)	39.70											
	Main Track	1.700						\$4,776 67	\$6,120	\$1,836 24	\$3,224	\$6,120	\$3,224
	2nd Main Track	1.700						1,433 00	2,436	568 90	907	2,436	907
	Sidings	.120						956 32	114	379 27	46	114	46
	Totals.								\$10,670	.....	\$4,237	\$10,670	\$4,237
Thurston....	Main Line (Over N. P. Ry.)	40.00											
	Main Track	25.680						\$4,776 67	\$122,068	\$1,910 67	\$49,066	\$122,068	\$49,066
	2nd Main Track	25.100						1,433 00	38,097	573 20	14,439	38,097	14,439
	Sidings	7.710						956 32	7,865	382 12	2,946	7,865	2,946
		Totals.							\$169,127	.....	\$66,451	\$169,127	\$66,451
	Main Line—												
	Main Track	166.610						\$4,776 67	\$708,841	.....	\$608,373	\$708,841	\$608,373
Totals....	2nd Main Track	141.960						1,433 00	208,414	.....	74,845	208,414	74,845
	Sidings	71.820						905 32	66,134	.....	23,268	66,134	23,268
	Branch Lines—												
	Main Track	5.090						1,433 00	7,251	.....	2,709	7,251	2,709
	2nd Main Track	1.860						477 67	645	.....	645	645	645
	Sidings	15.880						956 32	8,798	.....	1,436	8,798	1,436
	Totals.								\$1,079,078	.....	\$408,860	\$1,079,078	\$408,860

RECAPITULATION

Oregon-Washington R. R. & N. Co.—					
Track and equipment.....	1,116,220	\$47,014,500	\$19,101,026	\$2,680,802	\$1,089,182
Equipment (only) over foreign lines.....	408,170	.....	.....	1,079,076	.....
Totals.....	1,513,390	\$47,014,500	\$19,101,026	\$3,759,878	\$1,497,572
					\$50,774,500
					\$20,180,208
					408,380
					\$20,668,668

PACIFIC COAST RAILROAD.

COUNTIES	CLASSIFICATION OF TRACK	As'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
King.....	Main Line	46.00											
	Main Track		33,632	\$95,064.55	\$2,189,552	\$23,929.69	\$1,007,104	\$5,355.00	\$190,240	\$2,463.76	\$82,910	\$2,399,792	\$1,000,104
	2nd Main Track		10,888	19,519.27	201,696	8,978.91	92,734	1,009.80	16,565	7,634	218,191	100,369	
	Sidings		20,311	13,012.91	264,306	5,868.94	121,580	1,071.20	21,797	492.75	10,068	286,082	131,658
	Branch Line												
	Main Track		18,953	29,279.05	554,926	13,468.96	255,969	2,410.20	45,681	1,108.69	21,013	600,407	279,279
	Sidings		5,068	6,536.46	32,750	2,992.97	15,079	585.60	2,698	246.38	1,241	35,478	16,860
	Totals.....		88,292		\$9,243,159		\$1,491,833		\$269,971		\$729,506	\$1,510,130	\$1,514,659

PENSINSULAR RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
				Rate per mile actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value
Mason.....	Main Line	37.00	15.023	\$10,000 00	\$156,220	\$97,806	\$5,465 77	\$85,235	\$21,587	\$99,342	
	Main Track		11.240	2,000 00	22,480	8,318	1,091 15	12,295	4,138	12,856	
	Sidings										
	Totals.....		26.868	.....	\$178,710	\$96,123	.....	\$97,530	\$66 075	\$102,198	

Schedule "C"—Table I.—Steam Railroads—Continued.

PORT TOWNSEND SOUTHERN RAILROAD.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value
Jefferson.....	Main Line	39.00									
	Main Track		26.40	\$7,500 00	\$108,000	\$2,925 00	\$77,220	\$908 90	\$10,399	\$158 62	\$81,276
	Sidings		1.282	1,500 00	1,923	585 00	750	78 78	101	80 72	759
	Totals		27.682		\$199,923		\$77,970		\$10,500		\$82,065

PUGET SOUND & BAKER RIVER RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value
Skagit.....	Main Line	27.00									
	Main Track		21.576	\$7,900 01	\$108,871	\$2,133 00	\$45,855	\$748 18	\$15,998	\$202 01	\$49,913
	Sidings		1.049	1,560 00	1,657	426 60	446	149 64	157	40 40	490
	Totals		22.625		\$170,528		\$46,043		\$16,150		\$80,408

PUGET SOUND & WILAPA HARBOR RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	As'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-way and Tracts				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Lewis.....	Main Line	35.80	31.971	\$16,000 00	\$511,586	\$5,728 00	\$186,180	\$1,864 28	\$59,603	\$387 41	\$21,539	\$371,139	\$204,468
	Main Track		4.605	3,200 00	14,786	1,145 60	5,275	373 86	1,717	133 48	615	16,438	5,860
	Sidings												
	Totals.....		36.576		\$526,272		\$186,405		\$61,320		\$21,963	\$387,592	\$210,328
Pacific.....	Main Line	37.50	23.651	\$16,000 00	\$378,416	\$6,000 00	\$141,903	\$1,864 28	\$44,092	\$399 11	\$16,535	\$422,508	\$158,441
	Main Track		4.951	3,200 00	15,843	1,200 00	5,941	373 86	1,846	139 82	692	17,689	6,683
	Sidings												
	Totals.....		28.602		\$394,259		\$147,847		\$45,938		\$17,227	\$440,197	\$165,074
Thurston...	Main Line	40.00	10.298	\$16,000 00	\$164,768	\$6,400 00	\$65,937	\$1,864 28	\$19,168	\$745 71	\$7,679	\$188,946	\$73,560
	Main Track		1.364	3,200 00	4,365	1,280 00	1,746	373 86	509	149 14	208	4,874	1,949
	Sidings												
	Totals.....		11.662		\$169,133		\$67,683		\$19,707		\$7,882	\$188,840	\$75,535
Totals.....	Main Line—												
	Main Track		65.920	\$16,000 00	\$1,054,720		\$300,943	\$1,864 28	\$122,823		\$46,532	\$1,177,613	\$436,495
	Sidings		10.920	3,200 00	8,944		12,982	373 86	4,072		1,510	39,016	14,472
	Totals.....		76.840		\$1,063,664		\$303,925		\$126,895		\$47,042	\$1,216,629	\$450,967

Schedule "C"—Table I.—Steam Railroads—Continued.

PULLMAN COMPANY (Equipment only).

COUNTIES	CLASSIFICATION OF TRACK	Am'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
Adams.....		40.00							\$9,697		\$8,879	\$9,697	\$8,879
Chelan.....		40.90							3,906		1,598	3,906	1,598
Clarke.....		33.70							7,811		2,682	7,811	2,682
Columbia...		36.50							1,464		584	1,464	584
Cowlitz.....		29.40							19,646		5,776	19,646	5,776
Douglas.....		40.00							917		367	917	367
Franklin....		43.00							2,028		872	2,028	872
Grant.....		36.50							3,463		1,364	3,463	1,364
Grays Harb'r		38.00							5,962		2,254	5,962	2,254
King.....		46.00							14,963		6,893	14,963	6,893
Lewis.....		35.80							5,840		2,340	5,840	2,340
Lincoln.....		42.30							5,382		2,255	5,382	2,255
Pend Oreille.		40.60							923		375	923	375
Pierce.....		46.60							21,825		10,170	21,825	10,170
Spokane.....		41.60							3,233		1,345	3,233	1,345
Thurston....		39.70							14,150		5,618	14,150	5,618
Walla Walla..		42.00							17,029		6,812	17,029	6,812
Whitman....		40.20							25,970		10,907	25,970	10,907
Totals.....									10,800		4,141	10,800	4,141
									\$138,495		\$73,122	\$138,495	\$73,122

SEATTLE, PORT ANGELES & WESTERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
Clallam.....	Main Line	50.00	50.322	\$12,500 00									
	Main Track		10.205	2,500 00		\$741,900	\$6,250 00	\$370,950	\$8,346 43	\$198,617	\$99,309	\$940,517	\$470,259
	Sidings					25,512	1,250 00	12,756	669 29	6,380	314 65	31,342	16,171
	Totals.....		60.527			\$767,412		\$383,706		\$205,447	\$102,724	\$672,556	\$486,430
Jefferson.....	Main Line	30.00	9.298	\$12,500 00									
	Main Track		1.004	2,500 00		\$115,850	\$4,875 00	\$44,837	\$8,346 43	\$80,581	\$12,044	\$146,231	\$97,081
	Sidings					2,510	975 00	979	669 29	672	281 02	3,182	1,241
	Totals.....		10.292			\$117,890		\$45,966		\$81,553	\$12,306	\$149,419	\$98,272
Totals....	Main Line.....		68.550	\$12,500 00									
	Main Track		11.209	2,500 00		\$857,250		\$415,987	\$8,346 43	\$229,498	\$111,353	\$1,080,745	\$627,290
	Sidings					28,022		13,735	669 29	7,592	3,677	39,624	17,412
	Totals.....		79.739			\$985,272		\$429,672		\$237,000	\$115,080	\$1,123,272	\$644,702

SPOKANE & BRITISH COLUMBIA RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value
Perry.....	Main Line	45.50	39.400	\$3,777 23	\$137,492	\$1,713 65	\$22,559	\$341 10	\$12,416	\$5,649	\$149,908	\$23,208
	Main Track		4.160	755 45	8,143	343 78	1,430	69 22	234	139	3,427	1,559
	Sidings											
	Totals.....		40.560	.....	\$140,635	.....	\$23,989	.....	\$12,700	.....	\$153,335	\$24,767

Schedule "C"—Table I.—Steam Railroads—Continued.

SPOKANE INTERNATIONAL RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	As'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
				Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value	
Spokane.....	Main Line	39.70	19,850	\$24,280 41	\$481,906	\$9,039 32	\$191,341	\$2,330 91	\$46,209	\$225 37	\$18,938	\$628,236	\$309,710	
	Main Track		8,460	4,866 08	41,684	1,927 86	16,200	468 18	3,939	185 07	1,564	44,973	17,854	
	Sidings													
	Totals		28,310		\$523,590		\$207,541		\$50,208		\$19,983	\$673,208	\$327,564	
(ONLY) OVER FOREIGN														
EQUIPMENT LINES.	Main Line	39.70	769					\$2,330 91	\$1,122	\$225 37	\$712	\$1,792	\$712	
														(Over O.-W. R. R. & N. Co.)
	Grand Totals		29,079		\$523,590		\$207,631		\$52,000		\$20,645	\$675,000	\$228,276	

SPOKANE, PORTLAND & SEATTLE RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value
Adams.....	Main Line	40.00		\$95,831 00	\$4,087,552	\$68,332 40	\$1,615,021			\$97,749	\$4,305,924	\$1,082,770
	Main Track			19,106 20	214,985	7,093 43	85,834			8,001	228,587	80,435
	Buildings	11.100										
	Totals.....		53.328		\$4,252,137	\$4,252,137	\$1,700,855	\$178,374	\$77,350	\$1,772,265	\$1,432,611	

Benton.....	Main Line.....	43.00	64.598	\$95,881 00	\$6,190,012	\$41,207 98	\$2,661,705	\$4,090 08	\$259,698	\$1,728 61	\$111,666	\$3,449,078	\$2,773,381
	Main Track.....		12.231	19,166 20	234,422	8,241 47	100,801	804 01	9,854	345 72	4,229	244,256	106,060
	Sidings.....												
	Totals.....		76.824		\$6,424,434		\$2,762,506		\$269,550		\$115,885	\$3,693,334	\$2,879,391
Clarke.....	Main Line.....	38.70	22.483	\$95,881 00	\$2,154,568	\$32,235 05	\$736,060	\$4,020 08	\$90,382	\$1,354 75	\$80,469	\$2,244,860	\$756,549
	Main Track.....		4.410	28,749 31	11,787	9,698 82	3,972	1,206 00	494	406 42		12,381	4,139
	2nd Main Track.....												
	Sidings.....		18.918	19,166 20	362,566	6,459 01	122,192	804 01	15,210	270 95	5,196	377,796	127,818
	Totals.....		41.811		\$2,528,941		\$852,254		\$106,066		\$85,762	\$2,632,657	\$888,006
Franklin.....	Main Line.....	43.00	58.150	\$95,881 00	\$5,572,572	\$41,207 33	\$2,396,206	\$4,020 08	\$238,795	\$1,738 61	\$100,519	\$5,806,337	\$2,496,725
	Main Track.....		12.231	19,166 20	233,982	8,241 47	100,804	804 01	9,815	345 72	4,229	243,777	104,824
	Sidings.....												
	Totals.....		70.387		\$5,806,554		\$2,496,810		\$243,850		\$104,789	\$6,050,114	\$2,601,549
Klickitat.....	Main Line.....	40.00	92.238	\$95,881 00	\$8,889,260	\$38,882 40	\$3,585,704	\$4,020 08	\$270,769	\$1,608 01	\$146,320	\$9,210,059	\$3,684,024
	Main Track.....		17.065	19,166 20	327,071	7,696 48	130,828	804 01	13,720	321 00	5,496	340,791	136,316
	Branch Lines—												
	Main Track.....		42.212	28,749 31	1,213,596	11,499 72	486,426	1,206 00	50,908	482 40	20,363	1,264,474	506,789
	Sidings.....		3.800	9,568 10	31,624	8,883 24	12,660	402 00	1,327	160 80	581	32,951	13,181
	Totals.....		154.815		\$10,411,621		\$4,164,608		\$436,754		\$174,702	\$10,845,275	\$4,289,310
Lincoln.....	Main Line.....	42.80	2.107	\$95,881 00	\$201,916	\$40,586 51	\$85,410	\$4,020 08	\$8,470	\$1,700 47	\$8,583	\$210,386	\$68,993
	Main Track.....												
	Sidings.....												
Skamania.....	Main Line.....	39.00	40.577	\$95,881 00	\$3,886,584	\$37,374 09	\$1,516,528	\$4,020 08	\$168,121	\$1,567 81	\$83,617	\$4,061,655	\$1,560,145
	Main Track.....		8.951	19,166 20	109,640	7,474 82	66,160	804 01	7,116	313 56	2,775	176,786	68,965
	Sidings.....												
	Totals.....		49.428		\$4,096,174		\$1,582,688		\$170,237		\$86,392	\$4,238,411	\$1,649,060
Spokane.....	Main Line.....	39.70	34.581	\$95,881 00	\$6,313,982	\$38,044 91	\$1,315,681	\$4,020 08	\$130,017	\$1,595 95	\$65,100	\$6,452,949	\$1,370,821
	Main Track.....		6.969	19,166 20	162,228	7,608 96	82,494	804 01	5,547	319 19	2,302	157,775	54,086
	Sidings.....												
	Totals.....		41.490		\$6,446,160		\$1,398,125		\$144,564		\$67,392	\$6,590,724	\$1,425,517
Whitman.....	Main Line.....	40.20	8.172	\$95,881 00	\$736,131	\$38,524 06	\$314,819	\$4,020 08	\$32,852	\$1,616 06	\$13,206	\$815,993	\$328,025
	Main Track.....		7.629	19,166 20	144,302	7,704 81	58,010	804 01	6,063	323 21	2,433	150,355	60,443
	Sidings.....												
	Totals.....		15.701		\$927,433		\$372,829		\$38,905		\$15,639	\$966,338	\$388,468

Schedule "C"—Table I.—Steam Railroads—Continued.

SPOKANE, PORTLAND & SEATTLE RAILWAY—Concluded.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equal-ized rate per mile	Equal-ized value	Rate per mile, actual value	Actual value	Equal-ized rate per mile	Equal-ized value	Actual value	Equalized value
Totals....	Main Line— Main Track.....	365.083		\$95,881 00	\$64,081,477		\$14,167,114		\$1,467,444		\$684,299	\$86,448,921	\$14,761,418
	Sidings.....	410		98,749 81	11,787		8,972		1,208 00		1,167	19,281	4,189
	Branch Line— Main Track.....	94.866		19,169 20	1,818,796		716,928		804 01		80,074	1,865,088	746,997
	Sidings	42.212		28,749 31	1,213,596		485,498		1,208 00		20,868	1,294,474	508,789
	Total.....	8.300		9,683 10	81,624		12,650		492 00		581	82,951	18,181
	Totals.....	505.851		\$38,067,250			\$15,386,065		\$1,598,470		\$845,434	\$89,668,720	\$16,081,519

TACOMA EASTERN RAILROAD.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd rate to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
Lewis.....	Branch Line	35.80											
	Main Track	17.554	\$16,872.85	\$298,177	\$6,040.30	\$108,081	\$9,850.34	\$102,697	\$8,004.42	\$96,705	\$998,874	\$142,795	
	Sidings	6.788	2,586.76	17,400	929.28	6,261	900.06	6,064	822.22	2,171	23,554	8,432	
	Totals	24.292		\$313,667		\$112,292			\$108,761		\$38,966	\$422,428	\$151,228
Pierce.....	Main Line	46.60											
	Main Track	50.094	\$25,987.45	\$1,259,334	\$13,090.17	\$305,853	\$9,000.52	\$450,602	\$4,194.24	\$209,980	\$1,770,136	\$315,553	
	Sidings	24.049	5,191.49	124,860	2,419.23	66,180	1,800.10	43,291	888.85	20,174	168,141	78,364	
	Branch Lines— Main Track	20.968	16,872.35	354,001	7,892.52	165,068	5,880.34	122,816	2,793.25	57,232	477,017	222,590	
	Sidings	5.083	2,506.76	13,925	1,259.62	6,068	900.06	4,580	419.42	2,111	17,569	8,199	
	Totals	100.180		\$1,791,600		\$684,000		\$691,299		\$282,497	\$6,412,880	\$1,124,406	

Totals....	Main Line—	50.004	\$25,087 45	\$1,230,534	\$305,538	\$2,000 52	\$450,002	\$209,980	\$1,750,136	\$315,568
	Main Track	24.049	5,191 40	124,860	58,180	1,800 10	43,291	30,174	168,141	78,354
	Branch Lines—									
	Main Track	33.547	16,872 35	650,378	271,090	5,850 34	225,513	98,997	875,901	365,069
	Sidings	11.771	2,866 75	30,555	12,349	900 05	10,584	4,282	41,149	16,681
	Totals	124.431	.....	\$2,105,317	\$947,201	.....	\$730,000	\$328,458	\$2,885,317	\$1,275,634

THURSTON COUNTY RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Asst'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value	Actual value	Equalized value
Thurston....	Main Line	40.00	4.825	\$7,500 00	\$38,188	\$14,775	\$5,008 19	\$2,002 45	\$20,343	\$24,137
	Main Track .....	.....	5.738	1,500 00	8,607	600 00	1,001 24	400 50	14,582	5,741
	Totals .....	.....	10.563	.....	\$44,796	.....	\$29,900	.....	\$74,885	\$29,878

WASHINGTON, IDAHO & MONTANA RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Asst'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value	Actual value	Equalized value
Whitman....	Main Line	40.20	3.380	\$22,980 80	\$74,400	\$29,915	\$9,890 16	\$2,757 78	\$9,188	\$39,128
	Main Track .....	.....	2.300	4,473 88	10,290	1,798 50	1,872 08	551 55	13,446	5,406
	Totals .....	.....	5.680	.....	\$84,790	.....	\$26,000	.....	\$110,780	\$44,534

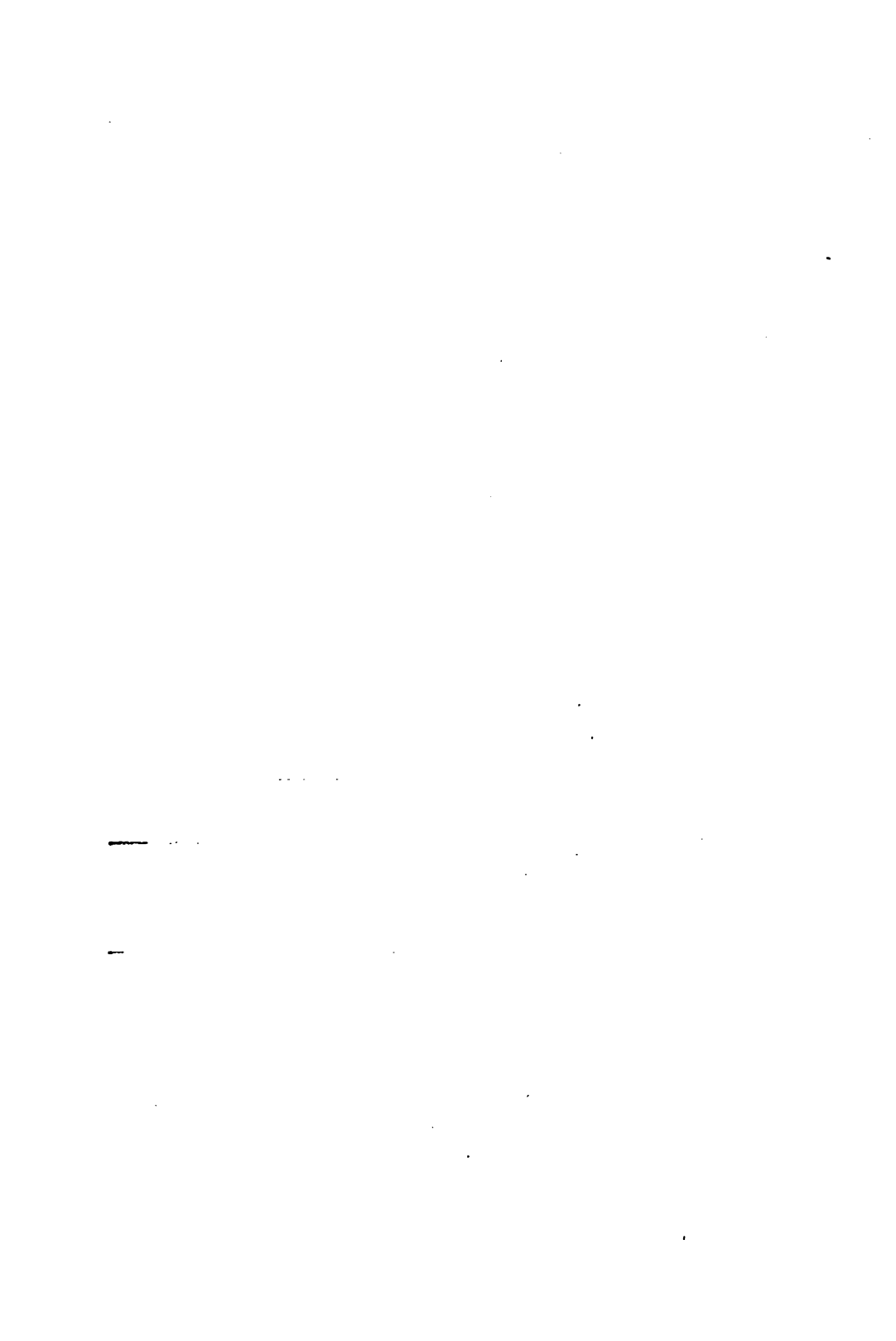
Schedule "C"—Table I.—Steam Railroads—Concluded.

WASHINGTON WESTERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
Snohomish...	Main Line	41.60		\$7,500 00	\$83,392 1,173	\$3,120 00 624 00	\$34,601 488	\$753 86 150 77	\$3,392 118	\$313 60 62 72	\$6,487 49	\$38,178 537
	Main Track			1,500 00								
	Sidings											
	Totals.....		11.901	.....	\$84,565	.....	\$35,179	.....	\$3,500	.....	\$6,586	\$38,715

WATERVILLE RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
			Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value	
Douglas.....	Main Line	40.00											
	Main Track	5.002	\$7,900 00	\$40,227	\$3,160 00	\$16,091	\$1,509 63	\$7,667	\$3,075	\$47,914	\$19,166		
	Sidings	1.000	1,560 00	2,684	632 00	1,074	301 68	513	130 77	3,197	1,279		
	Totals.....		.....	\$42,911	.....	\$17,165	.....	\$8,200	.....	\$51,111	\$20,445		



SCHEDULE "C"—Table II.—INTERURBAN LINES (Electric).

NAME OF ROAD	COUNTY	Assessed ratio to actual value (Pct.)	CLASSIFICATION OF TRACK	AS REAL PROPERTY		AS PERSONAL PROPERTY		TOTAL REAL AND PERSONAL PROPERTY	
				Actual value	Equalized value	Actual value	Equalized value	Actual value	Equalized value
North Coast Power Company.....	Clarke.....	33.70	Street Railway Lines.....	.....	.....	\$119,782	\$40,367	\$119,782	\$40,367
	Lewis.....	35.80	Interurban Lines.....	\$20,100	\$6,774	13,180	4,442	33,280	11,216
			Street Railway Lines.....	.....	.....	171,513	61,402	171,513	61,402
			Interurban Lines.....	13,200	4,728	13,350	6,599	31,550	11,326
			Totals.....	\$33,300	\$11,500	\$332,325	\$112,780	\$356,125	\$124,290
Pacific Northwest Traction Company.....	King.....	46.00	Interurban Lines.....	\$334,292	\$133,761	\$55,832	\$25,706	\$390,144	\$179,467
	Skiagit.....	27.00	Interurban Lines.....	774,429	209,066	190,222	51,360	964,651	260,456
	Snohomish.....	41.60	Interurban Lines.....	719,488	299,307	130,287	50,089	859,775	349,846
	Whatcom.....	35.90	Interurban Lines.....	\$79,921	100,276	68,009	24,631	347,960	124,907
			Totals.....	\$2,107,500	\$762,440	\$438,000	\$151,736	\$2,545,500	\$914,176
Puget Sound Electric Railway.....	King.....	46.00	Interurban Lines.....	\$1,628,437	\$773,931	\$106,113	\$39,770	\$1,734,550	\$813,751
	Pierce.....	46.00	Interurban Lines.....	317,231	289,880	94,179	94,837	411,410	424,717
			Totals.....	\$2,510,668	\$1,169,811	\$239,292	\$133,607	\$2,750,000	\$1,298,468
Spokane & Inland Empire Railroad Co.....	Spokane.....	39.70	Interurban Lines.....	\$2,614,150	\$1,067,513	\$329,880	\$237,954	\$3,213,530	\$1,275,772
	Whitman.....	40.20	Street Railway Lines.....	.....	.....	1,704,400	676,671	1,704,400	676,671
			Interurban Lines.....	2,846,060	1,148,714	386,560	215,864	3,232,620	1,369,535
			Totals.....	\$5,460,210	\$2,181,032	\$2,540,780	\$1,130,479	\$8,000,000	\$3,312,011
Washington Water Power Company.....	Spokane.....	39.70	Interurban Lines.....	\$773,000	\$308,395	\$115,950	\$46,032	\$888,950	\$354,888
			Street Railway Lines.....	.....	.....	2,478,060	933,736	2,478,060	933,736
			Totals.....	\$773,000	\$308,395	\$2,594,000	\$1,029,818	\$3,372,000	\$1,338,624

Walla Walla Valley Railway Company.....	Walla Walla.....	42.00	Interurban Lines Street Railway Lines.....	\$122,400 \$51,408 \$122,400	\$41,700 160,840 67,553 \$202,600	\$17,539 100,840 \$225,000	\$68,947 \$136,500
Yakima Valley Transportation Company.....	Yakima.....	46.00	Interurban Lines Street Railway Lines.....	\$115,406 \$53,087 \$115,406	\$90,078 216,806 59,788 \$276,944	\$27,696 216,806 \$302,350	\$89,723 99,788 \$180,451
Totals.....			Interurban Lines Street Railway Lines.....	\$11,126,484 \$4,528,644 \$11,126,484	\$2,109,980 4,851,511 \$6,961,491	\$841,419 1,029,587 \$2,770,956	\$5,370,053 1,029,387 \$7,229,000

SCHEDULE "C"—Table III.—STREET RAILWAYS.

NAME OF ROAD	COUNTY	Assessed ratio to actual value (Pct.)	OPERATING PROPERTY (Assessed as personal property)	
			Actual value	Equalized value
Everett Railway, Light and Water Company..	Snohomish.....	41.00	\$1,275,000	\$530,400
Grays Harbor Railway and Light Company....	Grays Harbor...	38.00	1,060,000	360,000
Lewiston-Clarkston Transit Company.....	Asotin.....	46.00	13,700	6,302
Loyal Railway	King.....	46.00	13,500	6,216
Olympia Light and Power Company.....	Thurston.....	40.00	330,000	132,000
Pacific Traction Company.....	Pierce.....	46.60	272,000	126,732
Puget Sound Traction, Light and Power Co...	King.....	46.00	\$16,723,200	\$7,662,672
	Snohomish.....	41.60	198,400	82,534
	Whatecom.....	35.90	1,700,000	681,840
	Totals.....		\$18,681,600	\$8,407,046
Seattle and Rainier Valley Railway Company..	King.....	46.00	\$1,200,000	\$552,000
Tacoma Railway and Power Company.....	Pierce.....	46.60	3,480,000	1,607,700
Western Washington Power Company.....	King.....	46.00	37,500	17,320
Willapa Electric Company.....	Pacific.....	37.50	37,000	22,625
Totals.....			\$66,410,300	\$31,817,356

**SCHEDULE "C"—Table IV.—RECAPITULATION OF STEAM RAILROADS
—VALUATIONS BY COUNTIES.**

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
1. ADAMS	40.00		
Chicago, Milwaukee & St. Paul Railway.....		\$7,281,869	\$2,904,744
Northern Pacific Railway.....		6,591,597	2,636,626
Oregon-Washington Railroad & Navigation Company.....		4,035,731	1,614,298
Pullman Company (Equipment only).....		9,697	8,879
Spokane, Portland & Seattle Railway.....		4,430,511	1,772,205
Totals.....		\$22,329,305	\$9,931,747
2. ASOTIN	46.00		
3. BENTON	43.00		
Chicago, Milwaukee & St. Paul Railway.....		\$492,562	\$211,798
Northern Pacific Railway.....		4,850,433	2,085,687
Oregon-Washington Railroad & Navigation Company.....		1,736,767	772,611
Spokane, Portland & Seattle Railway.....		6,698,984	2,878,391
Totals.....		\$13,833,666	\$5,948,487
4. CHELAN	40.90		
Great Northern Railway.....		\$5,812,589	\$2,604,330
Pullman Company (Equipment only).....		3,906	1,698
Totals.....		\$5,816,495	\$2,606,028
5. CLALLAM	50.00		
Little River Railroad & Logging Company.....		\$55,000	\$28,000
Milwaukee Terminal Railway Company.....		20,019	10,010
Seattle, Port Angeles & Western Railway.....		972,869	486,430
Totals.....		\$1,048,879	\$524,440
6. CLARKE	33.70		
Great Northern Railway.....		\$204,815	\$69,022
Northern Pacific Railway.....		3,174,331	1,080,750
Oregon-Washington Railroad & Navigation Company.....		123,911	41,768
Pullman Company (Equipment only).....		7,811	2,682
Spokane, Portland & Seattle Railway.....		2,695,027	908,006
Totals.....		\$3,145,895	\$1,071,168
7. COLUMBIA	36.50		
Northern Pacific Railway.....		\$904,151	\$331,014
Oregon-Washington Railroad & Navigation Company.....		3,514,510	1,282,797
Pullman Company (Equipment only).....		1,404	534
Totals.....		\$3,820,125	\$1,594,345
8. COWLITZ	29.40		
Great Northern Railway.....		\$460,588	\$135,413
Northern Pacific Railway.....		5,270,695	1,549,584
Oregon-Washington Railroad & Navigation Company.....		236,479	75,404
Pullman Company (Equipment only).....		19,640	5,776
Totals.....		\$5,987,402	\$1,766,177

Schedule "C"—Table IV.—Continued.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
9. DOUGLAS	40.00		
Great Northern Railway		\$8,374,654	\$1,349,861
Pullman Company (Equipment only)		917	367
Waterville Railway		51,111	20,445
Totals		\$8,426,682	\$1,370,673
10. FERRY	45.50		
Great Northern Railway		\$2,065,442	\$953,426
Spokane & British Columbia Railway		158,335	69,767
Totals		\$2,248,777	\$1,023,193
11. FRANKLIN	43.00		
Northern Pacific Railway		\$5,418,533	\$2,739,969
Oregon-Washington Railroad & Navigation Company		1,415,401	608,622
Pullman Company (Equipment only)		2,028	872
Spokane, Portland & Seattle Railway		6,060,114	2,601,549
Totals		\$13,896,076	\$5,971,012
12. GARFIELD	34.80		
Oregon-Washington Railroad & Navigation Company		\$587,677	\$204,512
Totals		\$587,677	\$204,512
13. GRANT	39.50		
Chicago, Milwaukee & St. Paul Railway		\$6,765,413	\$1,487,337
Great Northern Railway		5,987,829	2,365,192
Northern Pacific Railway		2,645,969	1,045,156
Pullman Company (Equipment only)		8,453	1,364
Totals		\$12,402,664	\$4,899,049
14. GRAYS HARBOR	38.00		
Chicago, Milwaukee & St. Paul Railway		\$170,513	\$64,907
Northern Pacific Railway		3,590,479	1,366,688
Oregon-Washington Railroad & Navigation Company		2,011,538	764,866
Pullman Company (Equipment only)		5,962	2,254
Totals		\$5,784,762	\$2,198,700
15. ISLAND	46.00		
16. JEFFERSON	39.00		
Port Townsend Southern Railroad		\$210,423	\$82,065
Seattle, Port Angeles & Western Railway		149,413	58,272
Milwaukee Terminal Railway Company		38,207	12,961
Totals		\$398,043	\$153,298
17. KING	46.00		
Canadian Pacific Railway (Equipment only)		\$14,696	\$6,780
Chicago, Milwaukee & St. Paul Railway		6,834,167	3,163,717
Great Northern Railway		6,464,675	2,973,730
Milwaukee Terminal Railway Company		72,743	33,422
Northern Pacific Railway		17,838,269	8,208,304
Oregon-Washington Railroad & Navigation Company		1,568,831	721,663
Pacific Coast Railway Company		3,510,190	1,614,669
Pullman Company (Equipment only)		14,963	6,883
Totals		\$36,313,473	\$16,704,198

Schedule "C"—Table IV.—Continued.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
18. KITSAP	42.50		
Milwaukee Terminal Railway Company.....		\$41,501	\$17,676
Totals.....		\$41,501	\$17,676
19. KITTITAS	38.50		
Chicago, Milwaukee & St. Paul Railway.....		\$6,197,004	\$6,155,848
Northern Pacific Railway.....		8,342,146	3,404,226
Totals.....		\$17,039,150	\$6,560,074
20. KICKITAT	40.00		
Oregon Trunk Railway.....		\$125,450	\$50,180
Spokane, Portland & Seattle Railway.....		10,848,275	4,339,310
Totals.....		\$10,973,725	\$4,389,490
21. LEWIS	35.80		
Centralia Eastern Railway.....		\$56,568	\$20,262
Cowlitz, Chehalis & Cascade Railway.....		134,300	48,079
Great Northern Railway.....		368,726	132,004
Northern Pacific Railway.....		5,380,103	1,926,074
Oregon-Washington Railroad & Navigation Company.....		484,419	173,425
Pullman Company (Equipment only).....		14,916	5,340
Tacoma Eastern Railroad.....		422,426	151,228
Puget Sound & Willapa Harbor Railway.....		587,502	210,368
Totals.....		\$7,449,082	\$2,666,770
22. LINCOLN	42.30		
Chicago, Milwaukee & St. Paul Railway.....		\$54,840	\$23,197
Great Northern Railway.....		6,598,222	2,788,983
Northern Pacific Railway.....		4,000,716	1,946,108
Oregon-Washington Railroad & Navigation Company.....		643,727	272,297
Pullman Company (Equipment only).....		5,532	2,255
Spokane, Portland & Seattle Railway.....		210,386	88,998
Totals.....		\$12,108,223	\$5,121,778
23. MASON	37.00		
Blakely Railroad.....		\$147,495	\$54,873
Northern Pacific Railway.....		24,647	9,119
Peninsular Railway.....		276,210	102,198
Totals.....		\$448,352	\$166,190
24. OKANOGAN	40.20		
Great Northern Railway.....		\$8,973,182	\$1,597,200
Totals.....		\$8,973,182	\$1,597,200
25. PACIFIC	37.50		
Northern Pacific Railway.....		\$1,128,486	\$423,182
Oregon-Washington Railroad & Navigation Company.....		774,773	290,541
Puget Sound & Willapa Harbor Railway.....		410,197	166,074
Totals.....		\$2,313,456	\$879,797

Schedule "C"—Table IV.—Continued.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
26. PEND OREILLE	40.00		
Great Northern Railway.....		\$1,535,790	\$380,632
Chicago, Milwaukee & St. Paul Railway.....		2,175,653	553,308
Pullman Company (Equipment only).....		923	275
Totals.....		\$3,705,256	\$1,504,336
27. PIERCE	46.00		
Chicago, Milwaukee & St. Paul Railway.....		\$1,925,708	\$897,377
Great Northern Railway.....		473,222	220,521
Milwaukee Terminal Railway Company.....		230,719	135,009
Northern Pacific Railway.....		10,540,501	4,911,922
Oregon-Washington Railroad & Navigation Company.....		605,971	282,948
Pullman Company (Equipment only).....		21,925	10,170
Tacoma Eastern Railroad.....		2,412,839	1,134,406
Totals.....		\$16,270,939	\$7,532,253
28. SAN JUAN	29.00		
29. SKAGIT	27.00		
Canadian Pacific Railway (Equipment only).....		\$16,670	\$4,501
Great Northern Railway.....		4,627,034	1,269,490
Northern Pacific Railway.....		3,150,592	850,741
Puget Sound & Baker River Railway.....		189,678	50,408
Totals.....		\$7,981,874	\$2,155,105
30. SKAMANIA	39.00		
Spokane, Portland & Seattle Railway.....		\$4,228,411	\$1,649,056
Totals.....		\$4,228,411	\$1,649,056
31. SNOHOMISH	41.00		
Canadian Pacific Railway (Equipment only).....		\$24,178	\$10,058
Chicago, Milwaukee & St. Paul Railway.....		749,941	311,376
Great Northern Railway.....		10,470,505	4,355,731
Marysville & Arlington Railway.....		151,832	63,170
Marysville & Northern Railway.....		61,000	25,666
Northern Pacific Railway.....		7,708,123	3,205,579
Pullman Company (Equipment only).....		8,233	1,345
Washington Western Railway.....		98,065	40,715
Totals.....		\$19,291,997	\$8,021,270
32. SPOKANE	39.70		
Chicago, Milwaukee & St. Paul Railway.....		\$1,932,002	\$785,354
Great Northern Railway.....		7,653,303	3,085,308
Northern Pacific Railway.....		8,435,357	3,355,974
Oregon-Washington Railroad & Navigation Company.....		6,558,181	2,602,896
Pullman Company (Equipment only).....		14,150	5,618
Spokane International Railway.....		975,000	225,276
Spokane, Portland & Seattle Railway.....		3,590,724	1,425,517
Totals.....		\$29,827,307	\$11,444,443
33. STEVENS	31.50		
Great Northern Railway.....		\$4,070,242	\$1,282,135
Totals.....		\$4,070,242	\$1,282,135

Schedule "C"—Table IV.—Concluded.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
34. THURSTON	40.00		
Centralia Eastern Railway.....		\$11,702	\$4,681
Chicago, Milwaukee & St. Paul Railway.....		1,081,769	432,708
Great Northern Railway.....		238,276	95,311
Northern Pacific Railway.....		5,582,064	2,232,827
Oregon-Washington Railroad & Navigation Company...		773,195	309,230
Pullman Company (Equipment only).....		17,029	6,812
Puget Sound & Willapa Harbor Railway.....		189,840	75,585
Thurston County Railway.....		74,905	29,878
Totals.....		\$7,967,970	\$3,137,082
35. WAHKIAKUM	35.00		
36. WALLA WALLA	42.00		
Northern Pacific Railway.....		\$4,313,882	\$1,811,830
Oregon-Washington Railroad & Navigation Company...		10,117,486	4,249,342
Pullman Company (Equipment only).....		25,970	10,907
Totals.....		\$14,457,338	\$5,072,079
37. WHATCOM	35.30		
Bellingham & Northern Railway.....		\$1,421,320	\$510,285
Canadian Pacific Railway (Equipment only).....		16,456	5,908
Great Northern Railway.....		3,368,456	1,218,250
Milwaukee Terminal Railway Company.....		25,221	9,064
Northern Pacific Railway.....		3,827,527	1,374,082
Totals.....		\$8,653,980	\$3,117,549
38. WHITMAN	40.20		
Chicago, Milwaukee & St. Paul Railway.....		\$5,220,700	\$2,098,722
Northern Pacific Railway.....		3,774,476	1,517,380
Oregon-Washington Railroad & Navigation Company...		13,813,159	5,552,891
Pullman Company (Equipment only).....		10,800	4,141
Spokane, Portland & Seattle Railway.....		985,338	388,468
Washington, Idaho & Montana Railway.....		110,780	44,584
Totals.....		\$23,895,758	\$9,606,086
39. YAKIMA	46.00		
Chicago, Milwaukee & St. Paul Railway.....		\$172,004	\$79,123
Northern Pacific Railway.....		8,713,110	4,008,082
Oregon-Washington Railroad & Navigation Company...		1,066,744	779,123
Totals.....		\$10,951,858	\$4,866,328
GRAND TOTALS		\$341,371,132	\$136,651,765

**SCHEDULE "C"—Table V.—RECAPITULATION OF STEAM RAILROADS—VALUATIONS BY RAILROADS
FOR THE YEAR 1917.**

	NAME OF RAILS	REAL PROPERTY		PERSONAL PROPERTY		TOTAL VALUATION	
		Right-of-Way and Tracks		Equipment and Rolling Stock		Real and Personal Property	
		Actual value	Equalized value	Actual value	Equalized value	Actual value	Equalized value
1	Bellingham & Northern Railway.....	\$1,218,710	\$437,519	\$902,610	\$72,737	\$1,421,320	\$510,955
2	Blakely Railroad.....	100,000	37,237	46,800	17,316	147,006	54,573
3	Canadian Pacific Railway (Equipment only).....			72,000	27,227	72,000	97,227
4	Centralia Eastern Railroad.....			1,277	467	68,800	24,943
5	Chicago, Milwaukee & St. Paul Railway.....	67,023	24,470	4,583,425	1,888,161	40,084,400	16,451,615
6	Cowlitz, Chehalis & Cascade Railway.....	35,500,975	46,835	8,014,660	3,151,667	134,500	43,079
7	Great Northern Railway.....	62,770,470	24,397,943	12,600	6,300	70,721,100	28,049,600
8	Little River Railroad & Logging Company.....	43,400	21,700	15,500	6,449	59,000	28,000
9	Marysville & Arlington Railway.....	136,392	56,722	31,925	13,281	168,317	70,000
10	Marysville & Northern Railway.....	49,075	20,416	196,000	88,325	245,075	108,325
11	Milwaukee Terminal Railway Company.....	287,600	129,837	4,830	1,732	292,437	110,069
12	Northern Pacific Railway.....	121,120	49,214,134	21,017,820	8,592,649	142,137,940	58,808,753
13	Northern Trunk Railway.....	106,770,785	19,101,095	3,769,940	1,497,572	110,540,725	40,306,325
14	Oregon-Washington Railroad & Navigation Company.....	47,014,560	1,467,853	966,971	36,075	48,481,531	1,503,928
15	Pacific Coast Railroad.....	3,243,159	66,123	97,500	4,065	3,340,659	1,012,188
16	Peninsular Railway.....	175,710	77,970	10,800	4,860	186,510	82,065
17	Port Townsend Southern Railroad.....	190,923	46,043	16,150	4,065	207,073	50,403
18	Puget Sound & Baker River Railway.....	170,523	46,043	126,946	47,062	296,469	103,465
19	Pullman Company (Equipment only).....	1,089,664	408,905	188,496	73,122	1,278,160	480,997
20	Seattle, Port Angeles & Western Railway.....	885,272	429,672	237,000	115,080	1,122,272	544,702
21	Spokane & British Columbia Railway.....	140,685	63,939	12,700	5,778	153,385	69,767
22	Spokane International Railway.....	523,000	207,631	52,000	20,645	575,000	228,276
23	Spokane, Portland & Seattle Railway.....	38,067,250	15,366,065	1,596,470	645,434	39,663,720	16,011,519
24	Tacoma Eastern Railway.....	2,105,317	97,019	730,000	328,433	2,835,317	1,275,634
25	Thurston County Railway.....	44,795	29,000	29,000	11,993	73,795	29,878
26	Washington, Idaho & Montana Railway.....	84,780	34,082	26,000	10,432	110,780	44,534
27	Washington Western Railway.....	84,565	35,179	8,500	3,586	93,065	38,715
28	Waterville Railway.....	42,911	17,165	8,200	3,230	51,111	20,445
29	Totals.....	\$900,000,974	\$121,864,239	\$41,394,158	\$16,797,533	\$941,371,182	\$138,651,795

SCHEDULE "C"—Table VI.—RECAPITULATION OF ELECTRIC RAILWAYS—VALUATIONS BY COUNTIES.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
ASOTIN	46.00		
Lewiston-Clarkston Transit Company.....		\$13,700	\$6,802
Totals.....		\$13,700	\$6,802
CLARKE	33.70		
North Coast Power Company.....		\$153,062	\$51,583
Totals.....		\$153,062	\$51,583
GRAYS HARBOR	38.00		
Grays Harbor Railway & Light Company.....		\$1,050,000	\$399,000
Totals.....		\$1,050,000	\$399,000
KING	46.00		
Loyal Railway		\$13,500	\$6,210
Pacific Northwest Traction Company.....		390,144	179,467
Puget Sound Electric Company.....		1,889,590	868,751
Puget Sound Traction, Light & Power Company.....		16,723,200	7,692,673
Seattle and Rainier Valley Railway Company.....		1,200,000	552,000
Western Washington Power Company.....		37,500	17,250
Totals.....		\$20,252,934	\$9,316,850
LEWIS	35.80		
North Coast Power Company.....		\$206,063	\$72,697
Totals.....		\$206,063	\$72,697
PACIFIC	37.50		
Willapa Electric Company.....		\$97,000	\$32,625
Totals.....		\$97,000	\$32,625
PIEROE	46.60		
Pacific Traction Company.....		\$272,000	\$126,752
Puget Sound Electric Company.....		911,410	424,717
Tacoma Railway & Power Company.....		3,450,000	1,607,700
Totals.....		\$4,633,410	\$2,159,169
SKAGIT	27.00		
Pacific Northwest Traction Company.....		\$964,651	\$260,456
Totals.....		\$964,651	\$260,456
SNOHOMISH	41.60		
Everett Railway, Light & Water Company.....		\$1,275,000	\$530,400
Pacific Northwest Traction Company.....		839,775	349,846
Puget Sound Traction, Light & Power Company.....		198,400	82,534
Totals.....		\$2,313,175	\$962,280

Schedule "C"—Table VI.—Concluded.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
SPOKANE	39.70		
Spokane & Inland Empire Railroad Company.....		\$4,917,990	\$1,932,443
Washington Water Power Company.....		3,372,000	1,333,684
Totals.....		\$8,289,990	\$3,266,127
THURSTON	40.00		
Olympia Light & Power Company.....		\$630,000	\$182,000
Totals.....		\$630,000	\$182,000
WALLA WALLA	42.00		
Walla Walla Valley Railway Company.....		\$325,000	\$136,500
Totals.....		\$325,000	\$136,500
WHATOOM	35.90		
Pacific Northwest Traction Company.....		\$347,980	\$134,907
Puget Sound Traction, Light & Power Company.....		1,760,000	631,840
Totals.....		\$2,107,980	\$766,747
WHITMAN	40.20		
Spokane & Inland Empire Railroad Company.....		\$3,382,010	\$1,359,568
Totals.....		\$3,382,010	\$1,359,568
YAKIMA	46.00		
Yakima Valley Transportation Company.....		\$302,350	\$180,481
Totals.....		\$302,350	\$180,481
GRAND TOTALS		\$44,498,275	\$19,116,885

SCHEDULE "C"—Table VII.—TELEGRAPH COMPANIES.

COUNTIES	Assessed ratio to actual value (Pct.)	WESTERN UNION TELEGRAPH COMPANY				POSTAL TELEGRAPH-CABLE COMPANY				TOTAL TELEGRAPH COMPANIES			
		Wire mileage	Actual value	Equalized value	Wire mileage	Actual value	Equalized value	Wire mileage	Actual value	Equalized value	Wire mileage	Actual value	Equalized value
1 Adams	40.00	409.88	\$85,504	\$14,082		\$9,900	\$8,980	649.88	\$45,104	\$18,042			
2 Asotin	45.00												
3 Benton	46.00	218.67	16,400	7,062				218.67	16,400	7,062			
4 Benton	40.90	268.87	19,978	8,171				268.87	19,978	8,171			
5 Chelan	50.00	80.88	6,029	8,015	42.00	2,810	1,155	122.88	9,889	4,170			
6 Clarke	38.70												
7 Columbia	36.50	187.24	14,048	6,126				187.24	14,048	6,126			
8 Cowlitz	29.40	408.60	80,270	8,869	168.00	9,240	2,717	571.00	39,510	11,616			
9 Douglas	40.00	68.20	4,740	1,898				68.20	4,740	1,898			
10 Ferry	45.00												
11 Franklin	48.00	872.38	27,929	12,000				872.38	27,929	12,000			
12 Garfield	34.00	16.09	1,204	419				16.09	1,204	419			
13 Grant	39.50	250.86	19,776	7,417	166.00	8,580	3,889	406.86	27,356	10,806			
14 Grays Harbor	38.00	131.22	9,842	8,740				131.22	9,842	8,740			
15 Island	46.00												
16 Jefferson	39.00	85.10	6,398	2,489	88.70	1,854	728	118.80	8,236	3,212			
17 King	46.00	1,043.85	78,299	36,013	458.87	26,210	11,597	1,502.22	108,409	47,610			
18 Kitsap	42.50	48.40	3,630	1,543	25.00	1,876	884	73.40	5,005	2,127			
19 Kittitas	38.50	386.42	29,664	11,418	270.00	14,880	5,717	656.42	44,306	17,185			
20 Klickitat	40.00												
21 Lewis	35.80	355.33	26,725	9,686	163.00	9,240	3,308	518.33	35,965	13,879			
22 Lincoln	42.30	457.79	84,324	14,623	42.00	2,810	977	499.79	86,644	15,800			
23 Mason	37.00												
24 Okanogan	37.50												
25 Pacific	37.50	62.58	4,714	1,798				62.58	4,714	1,798			
26 Pend Oreille	40.80	88.58	6,641	2,698				88.58	6,641	2,698			
27 Pierce	46.00	606.06	45,491	21,189	299.90	16,466	7,687	906.46	61,956	28,886			
28 San Juan	39.00												
29 Skagit	27.00	290.81	21,778	6,579	118.00	6,400	1,762	408.81	28,206	7,661			
30 Skamania	39.00												
31 Spokane	41.60	973.67	45,025	17,898	201.75	11,088	4,616	775.42	54,121	22,514			
32 Spokane	39.70	1,150.02	86,251	34,242	146.00	7,975	3,166	1,596.02	94,226	37,408			
33 Stevens	31.50												
34 Thurston	40.00	347.12	26,084	10,414	140.00	7,700	3,080	487.12	33,784	13,494			
35 Wahkiakum	36.00												
36 Walla Walla	42.00	455.61	24,171	14,332				455.61	24,171	14,332			
37 Whitman	35.90	141.49	10,612	3,810	146.80	7,891	2,869	298.29	18,608	6,679			
38 Whitman	40.30	1,118.77	88,833	38,830				1,118.77	88,833	38,830			
39 Yakima	46.00	278.07	20,855	9,598				278.07	20,855	9,598			
Totals		9,268.75	\$746,581	\$802,611	2,698.02	\$142,616	\$57,397	12,446.77	\$989,147	\$860,106			

SCHEDULE "D"—Abstract Showing Total Assessment of All Taxable Property in the State of Washington for the Year 1917.

COUNTIES		Aggregate value of taxable personal property (exclusive of steam railroads, electric railways and telegraph lines) as equalized by county boards	Aggregate value of real property (exclusive of steam railroads, electric railways and telegraph lines) as equalized by county boards	Aggregate value of real and personal property (exclusive of steam railroads, electric railways and telegraph lines) by county boards	Assessed ratio to actual value (Pct.)	Actual value of real and personal property (exclusive of steam railroads, electric railways and telegraph lines)
1	Adams	\$2,050,900	\$10,290,851	\$12,350,481	40.0	\$30,876,208
2	Anotin	1,149,000	3,597,450	4,746,540	46.0	10,818,566
3	Benton	988,180	6,243,900	7,237,140	43.0	16,790,791
4	Chelan	1,468,865	11,380,504	12,819,369	40.9	31,343,800
5	Challam	909,000	12,729,143	13,638,143	60.0	27,470,286
6	Clarke	1,004,895	10,831,330	12,596,125	33.7	37,166,721
7	Columbia	1,225,319	5,631,240	6,856,459	38.5	18,780,025
8	Cowlitz	792,089	6,660,438	7,452,527	29.4	25,212,602
9	Douglas	1,992,440	8,498,608	10,491,048	40.0	26,473,108
10	Ferry	624,243	1,813,948	2,438,191	46.9	5,149,870
11	Franklin	988,716	3,074,245	4,077,961	43.0	11,344,066
12	Garfield	1,119,894	3,582,400	4,702,824	34.8	13,513,862
13	Grant	1,484,706	8,543,230	9,882,940	39.5	24,883,519
14	Grays Harbor	4,971,466	24,076,779	29,048,264	38.0	76,442,800
15	Island	274,100	1,706,247	1,979,347	46.0	4,302,928
16	Jefferson	862,318	5,686,289	6,578,607	39.0	16,855,408
17	King	35,867,674	304,506,901	340,483,566	46.0	822,746,890
18	Kitsap	862,436	6,124,992	6,987,428	42.5	16,370,419
19	Kittitas	2,144,775	10,568,548	12,708,323	38.5	33,008,631
20	Klickitat	1,741,798	7,864,678	9,596,374	40.0	23,990,985
21	Lewis	2,406,919	16,826,994	17,823,913	35.8	49,787,466
22	Lincoln	4,060,210	17,221,710	21,911,920	42.3	51,801,229
23	Lyon	420,438	4,700,983	5,121,430	37.0	13,841,719
24	Mason	1,696,635	5,244,255	6,912,790	40.2	17,195,966
25	McNean	1,466,871	10,520,288	12,017,064	37.5	32,046,567
26	Pend Oreille	674,906	3,563,862	4,238,857	40.6	10,489,308
27	Pierce	16,114,086	62,106,845	77,219,831	46.6	165,707,869
28	San Juan	414,000	1,150,880	1,565,480	39.6	3,953,233
29	Shagit	1,728,745	9,729,120	11,457,865	27.0	42,381,587
30	Skamania	891,674	3,064,438	3,916,113	39.0	9,799,262
31	Spokane	5,307,000	25,809,680	31,117,580	41.6	74,801,755
32	Spokane	15,694,475	82,886,897	98,443,342	39.7	247,968,116
33	Slevens	1,416,905	6,509,744	7,926,709	31.5	25,184,156
34	Thurston	1,773,428	8,887,423	10,660,851	40.0	26,809,128
35	Wahkiakum	387,289	1,229,010	1,596,298	35.0	4,560,846
36	Wahkanum	4,544,433	21,506,900	26,050,233	42.0	62,084,364
37	Whitman	3,016,854	16,904,306	20,911,090	35.9	58,284,106
38	Yakima	6,818,988	29,086,080	34,904,068	40.3	86,286,010
39	Yakima	5,108,700	24,004,410	29,178,110	46.0	63,419,864
Totals		\$186,286,708	\$702,944,238	\$889,182,946	41.00	\$2,017,108,854

Schedule "D"—Concluded.

COUNTIES

ACTUAL VALUES AS DETERMINED BY
STATE BOARD OF EQUALIZATION

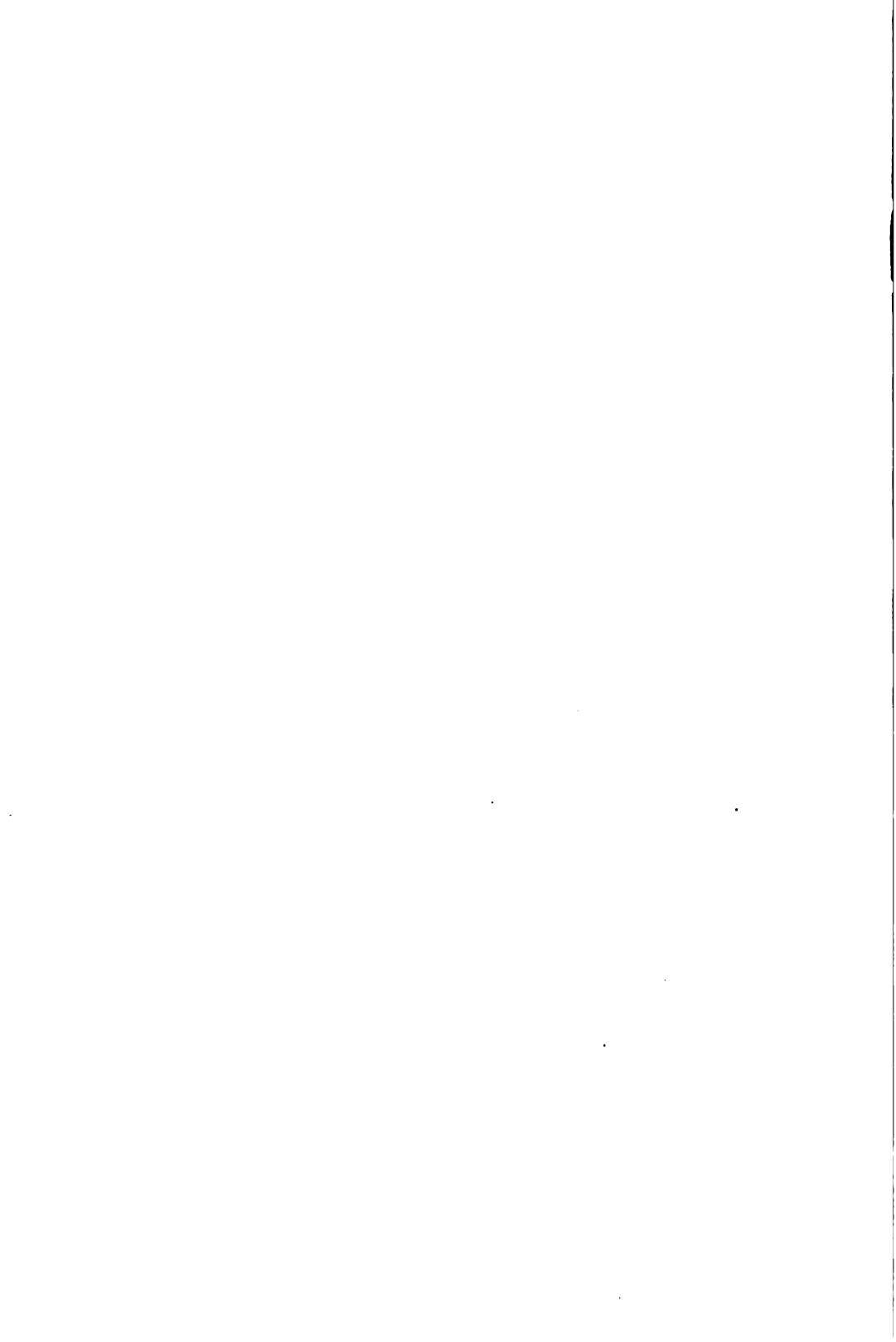
	Steam railroads	Electric railways	Telegraph lines	Total steam rail- roads, electric railways and telegraph lines	Aggregate actual value of real and personal property, including steam railroads, electric railways and telegraph lines	Aggregate value of all taxable property, real and personal, in- cluding steam rail- roads, electric rail- ways and telegraph lines, as equalized by state board of equalization
1 Adams	\$22,829,866	\$13,700	\$45,104	\$22,874,460	\$53,250,672	\$22,153,414
2 Asotin	.....	.....	.....	.....	10,332,265	4,298,442
3 Benton	13,883,686	.....	16,400	13,860,086	30,610,877	12,734,777
4 Blaine	8,816,486	.....	19,978	8,886,473	40,179,673	16,715,600
5 Chelan	1,048,878	.....	8,339	1,057,217	28,333,503	11,787,341
6 Clarke	6,145,896	138,062	.....	6,296,967	43,468,978	18,063,896
7 Columbia	3,680,125	.....	14,043	3,684,168	22,564,183	9,887,185
8 Cowlitz	6,007,408	.....	39,510	6,046,918	31,259,820	13,004,627
9 Douglas	3,426,682	.....	4,740	3,431,422	29,304,330	12,191,309
10 Ferry	2,248,777	.....	.....	2,248,777	7,398,447	3,077,985
11 Franklin	13,886,076	.....	27,829	13,914,006	25,258,100	10,507,906
12 Garfield	587,677	.....	1,204	588,881	14,102,743	5,867,042
13 Grant	12,402,664	.....	27,353	12,430,020	37,823,539	15,827,988
14 Grays Harbor	5,784,762	1,050,000	9,842	6,844,604	83,287,404	34,649,335
15 Island	.....	.....	.....	.....	4,302,693	1,700,110
16 Jefferson	393,043	.....	8,236	401,279	16,756,682	6,971,137
17 King	36,313,473	20,282,984	108,499	56,603,956	579,410,788	241,049,732
18 Kittitas	17,089,150	.....	5,005	17,083,656	16,417,015	6,839,259
19 Kittitas	10,973,725	.....	44,506	10,983,636	60,092,237	20,839,459
20 Klickitat	7,446,062	.....	36,806	7,486,110	34,964,600	14,646,044
21 Lewis	12,108,223	203,068	36,644	12,144,897	57,475,576	23,811,065
22 Lincoln	448,352	.....	.....	448,352	8,946,066	26,602,860
23 Mason	8,973,132	.....	.....	8,973,132	14,290,071	6,944,974
24 Okanogan	2,343,465	.....	4,714	2,485,169	21,169,127	8,806,808
25 Pacific	3,706,256	.....	6,641	3,711,897	34,489,726	14,844,717
26 Pend Oreille	16,270,930	87,000	6,641	16,363,571	14,151,200	5,887,201
27 Pierce	.....	4,638,410	61,896	20,966,326	186,674,225	77,660,456
28 San Juan	7,981,874	889,775	28,268	8,849,912	3,955,232	1,644,629
29 Skagit	4,228,411	.....	.....	4,228,411	51,296,449	21,836,256
30 Skamania	19,231,897	2,438,061	54,121	21,774,069	12,967,673	5,403,149
31 Snohomish	28,827,307	8,296,980	94,226	37,211,523	96,575,824	40,177,601
32 Spokane	4,070,242	.....	.....	4,070,242	286,179,639	118,640,808
33 Stevens	7,967,570	330,000	58,734	8,351,304	29,234,868	12,162,133
34 Thurston	.....	.....	.....	.....	34,833,432	14,491,450
35 Wahkiakum	14,457,383	325,000	34,171	14,816,509	4,560,646	1,897,409
36 Walla Walla	8,663,960	2,107,980	18,008	10,810,513	76,840,373	31,907,441
37 Whitcom	23,866,753	8,382,010	58,563	27,361,296	69,053,616	28,729,856
38 Whitman	10,578,668	892,350	20,355	10,962,063	114,137,336	47,504,365
39 Yakima	.....	.....	.....	.....	74,411,867	30,966,923
Totals	\$941,371,132	\$44,498,275	\$689,147	\$986,758,554	\$2,408,921,906	\$1,000,082,749

SCHEDULE "E"—Abstract Showing Amount of Tax for each of following funds: State General, State School, Military, Capitol Building Construction, Permanent Highway, Public Highway, University of Washington, Washington State College, Bellingham, Cheney and Ellensburg Normal Schools, to be raised by each county, for the year 1917.

COUNTIES		Amount of state general tax to be paid by each county	Amount of state school tax to be paid by each county	Amount of tax for military fund to be paid by each county	Amount of tax for capitol building construction fund to be paid by each county	HIGHWAY FUNDS		
						Amount of tax for permanent highway fund to be paid by each county	Amount of tax for public highway fund to be paid by each county	
								Rate of levy 1.35 mills	Rate of levy 1.00 mills
1	Adams	\$29,907	\$46,822	\$6,646	\$11,076	\$68,280	\$22,154	1
2	Asotin	5,808	9,027	1,200	2,149	6,448	4,298	2
3	Benton	17,192	26,748	3,821	6,867	19,102	12,735	3
4	Chelan	22,566	35,102	5,015	8,358	25,073	16,716	4
5	Clallam	15,913	24,758	3,586	6,668	17,661	11,789	5
6	Clarke	24,413	37,976	5,425	9,042	27,126	18,084	6
7	Columbia	12,673	19,713	2,816	4,668	14,061	9,387	7
8	Cowlitz	17,556	27,310	3,901	6,502	19,507	13,006	8
9	Douglas	16,459	25,602	3,657	6,066	18,237	12,191	9
10	Ferry	4,155	6,464	923	1,589	4,617	3,073	10
11	Franklin	14,186	22,067	3,152	5,238	15,762	10,508	11
12	Garfield	7,921	12,320	1,760	2,983	8,800	5,867	12
13	Grant	20,962	32,608	4,658	7,764	23,291	15,227	13
14	Grays Harbor	46,777	72,784	10,365	17,325	51,974	34,649	14
15	Island	2,417	3,759	537	895	2,685	1,790	15
16	Jefferson	9,411	14,689	2,061	3,486	10,467	6,971	16
17	King	325,417	606,204	72,315	120,525	361,575	241,050	17
18	Kitsap	9,220	14,343	2,049	3,415	10,245	6,880	18
19	Kittitas	28,138	43,768	6,252	10,420	31,259	20,839	19
20	Klickitat	19,637	30,547	4,364	7,273	21,819	14,540	20
21	Lewis	32,280	50,213	7,173	11,966	35,867	23,911	21
22	Lincoln	35,914	55,866	7,951	13,301	39,304	26,608	22
23	Mason	8,026	12,484	1,784	2,972	8,917	5,945	23
24	Okanogan	11,889	18,494	2,642	4,404	13,210	8,807	24
25	Pacific	19,365	30,124	4,304	7,172	21,517	14,346	25
26	Pend Oreille	7,948	12,303	1,765	2,944	8,831	5,887	26
27	Pierce	104,842	163,087	23,298	38,830	116,491	77,661	27
28	San Juan	2,220	3,464	468	822	2,467	1,645	28
29	Skagit	28,804	44,806	6,401	10,668	32,005	21,336	29
30	Skamania	7,294	11,347	1,621	2,702	8,105	5,403	30
31	Snohomish	54,240	84,373	12,053	20,089	60,266	40,178	31
32	Spokane	100,165	249,146	35,592	59,321	177,991	118,641	32
33	Stevens	16,419	25,540	3,649	6,081	18,243	12,162	33
34	Thurston	19,564	30,432	4,346	7,246	21,737	14,491	34
35	Wahkiakum	2,561	3,965	569	949	2,846	1,897	35
36	Walla Walla	43,156	67,132	9,550	15,984	47,951	31,967	36
37	Whatcom	38,735	60,333	8,619	14,365	43,095	28,730	37
38	Whitman	64,131	99,759	14,252	23,762	71,257	47,504	38
39	Yakima	41,792	65,010	9,287	15,479	46,435	30,937	39
Totals		\$1,350,112	\$2,100,174	\$300,025	\$500,041	\$1,500,124	\$1,000,083	

Schedule "E"—Concluded.

COUNTIES	STATE INSTITUTIONS OF HIGHER EDUCATION					Total amount of tax, including state general, state school, military, capitol building construction, permanent highway, public highway, University, Washington State College, Bellingham, Cheney and Ellensburg Normal Schools, to be paid by each county
	Amount of tax for University fund to be paid by each county	Amount of tax for Washington State College fund to be paid by each county	Amount of tax for Bellingham Normal School fund to be paid by each county	Amount of tax for Cheney Normal School fund to be paid by each county	Amount of tax for Ellensburg Normal School fund to be paid by each county	
	Rate of levy 0.74 mills	Rate of levy 0.45 mills	Rate of levy 0.162 mills	Rate of levy 0.13 mills	Rate of levy 0.108 mills	Rate of levy 8.330 mills
1 Adams	\$16,394	\$9,069	\$8,367	\$2,880	\$2,306	\$184,538
2 Asotin	3,181	1,984	658	559	464	35,806
3 Benton	9,424	5,731	1,985	1,056	1,375	108,081
4 Obelan	12,870	7,522	2,541	2,173	1,806	139,241
5 Clallam	8,723	5,304	1,792	1,532	1,273	98,188
6 Clarke	13,392	8,138	2,749	2,351	1,953	150,639
7 Columbia	6,946	4,225	1,427	1,220	1,014	78,196
8 Cowlitz	9,623	5,862	1,977	1,691	1,405	108,329
9 Douglas	9,022	5,486	1,853	1,595	1,317	101,554
10 Ferry	2,278	1,335	467	400	333	25,639
11 Franklin	7,776	4,729	1,597	1,366	1,135	87,531
12 Garfield	4,342	2,640	892	768	684	48,872
13 Grant	11,490	6,987	2,360	2,019	1,677	129,343
14 Grays Harbor	25,640	15,592	5,267	4,504	3,742	298,029
15 Island	1,325	806	272	233	193	14,912
16 Jefferson	5,159	3,137	1,060	906	753	58,070
17 King	178,377	108,472	36,640	31,536	26,033	2,007,944
18 Kitsap	5,054	3,073	1,068	888	737	56,802
19 Kittitas	15,421	9,378	3,168	2,709	2,251	173,508
20 Klokkitat	10,764	6,546	2,211	1,891	1,571	121,169
21 Lewis	17,694	10,760	3,635	3,108	2,562	199,179
22 Lincoln	19,686	11,972	4,044	3,458	2,873	221,602
23 Mason	4,399	2,676	904	778	642	49,522
24 Okanogan	6,517	3,963	1,339	1,145	951	73,361
25 Pacific	10,615	6,456	2,180	1,895	1,549	119,491
26 Pend Oreille	4,356	2,649	895	765	636	49,040
27 Pierce	57,469	34,947	11,804	10,096	8,387	646,912
28 San Juan	1,217	740	250	214	178	13,700
29 Skagit	15,789	9,601	3,243	2,774	2,304	177,731
30 Skamania	3,968	2,431	821	702	584	45,036
31 Snohomish	29,731	18,060	6,107	5,223	4,339	334,679
32 Spokane	87,794	53,388	18,084	15,423	12,813	988,278
33 Stevens	9,000	5,473	1,849	1,561	1,314	101,311
34 Thurston	10,724	6,521	2,202	1,884	1,566	120,714
35 Wahkiakum	1,404	854	289	247	205	15,806
36 Walla Walla	23,656	14,386	4,859	4,156	3,453	266,289
37 Whatcom	21,390	12,928	4,367	3,735	3,103	239,320
38 Whitman	35,153	21,377	7,220	6,176	5,130	395,711
39 Yakima	22,908	13,931	4,706	4,024	3,343	257,871
Totals	\$740,061	\$450,037	\$152,012	\$130,011	\$108,009	\$8,380,689



STATE OF WASHINGTON

MINUTES AND OFFICIAL
PROCEEDINGS

OF THE

State Board of Equalization

SESSION OF 1918

PROCEEDINGS

OF THE

STATE BOARD OF EQUALIZATION

Session of 1918

OLYMPIA, WASHINGTON, TUESDAY, September 3, 1918.

Pursuant to the provisions of the law relative to the organization and proceedings of the State Board of Equalization for the equalization of assessments, the Board met in the House Chamber on the 3rd day of September, 1918, the following named persons designated by law as members of such Board being present: Clark V. Savidge, Commissioner of Public Lands, Acting Chairman in the absence of Chairman *ex-officio*, C. W. Clausen, State Auditor, and Clark R. Jackson, State Tax Commissioner, and Secretary *ex-officio*.

On motion of Mr. Jackson, Mr. E. A. Voris was elected clerk of the Board at a salary of \$10.00 per day.

The following program for hearings before the Board was adopted:

September 3: Small steam roads, electric railways and telegraph lines.

September 4: Steam railways.

September 5: Eastern Washington counties.

September 6: Western Washington counties.

Mr. W. A. Johnson appeared on behalf of Grosscup & Morrow, attorneys, representing the Pullman Company.

Mr. James H. Smith, Assistant Treasurer of the Marysville & Arlington Railway Company, appeared before the Board on behalf of said road, principally in regard to an error in the amount of mileage reported.

Representatives of the following steam and electric railways were heard in the order named:

Mr. W. C. Smith, Tax Agent, on behalf of the Oregon Trunk Railway Company and the Spokane, Portland & Seattle Railway Company; Mr. W. T. Beck, President, on behalf of the Spokane & British Columbia Railway Company; Mr. B. H. Kizer, Attorney, on behalf of the Spokane & Inland Empire Railroad Company, Mr. W. H. Galvani, on behalf of the Walla Walla Valley Railway Company, and P. W. Parkhurst, Secretary and General Manager, on behalf of the Washington Western Railway Company.

At 12:00 m. the Board took recess until 1:30 p. m.

The Board reconvened at 1:30 p. m., with Clark V. Savidge and Clark R. Jackson present, Mr. Savidge presiding.

Mr. Arthur J. Shaw, representing the Spokane International Railway Company, was granted a hearing before the Board relative to the assessment of said road.

Mr. Emory E. Hess appeared before the Board on behalf of the Pacific Coast Railroad Company.

Mr. Ira Bronson, representing the Port Townsend Southern Railroad Company, appeared before the Board and at his request hearing on said road was postponed to Thursday, September 5th, in order that the assessor of Jefferson County could be present at the hearing.

Board adjourned to meet Wednesday, September 4, 1918, at 10:30 a. m.

WEDNESDAY, September 4, 1918.

The Board met at 10:30 a. m., with Clark V. Savidge in the chair. Present: Clark R. Jackson.

The minutes of the previous meeting were read and approved.

Representatives of the following roads were heard in the order named:

Mr. M. T. Sanders, Tax Commissioner, and Mr. Charles A. Murray, Western Tax Attorney and Commissioner, on behalf of the Northern Pacific Railway Company; Mr. John L. Snapp, Tax Agent, on behalf of the Great Northern Railway Company; Mr. A. S. Dudley, Tax Commissioner, St. Paul, and Mr. Floyd H. Williams, Tax Agent, on behalf of the Chicago, Milwaukee & St. Paul Railway Company.

The Board then adjourned to 10:30 a. m. September 5th.

THURSDAY, September 5, 1918.

The Board met at 10:30 a. m. pursuant to adjournment, with Clark V. Savidge presiding. Present: Clark R. Jackson.

Minutes of the previous meeting were read and approved.

Hearings of Eastern Washington counties were taken up, and representatives heard in the order named:

Mr. George S. Brown, County Assessor, on behalf of Lincoln County; Mr. Ernest G. Spencer, County Assessor, on behalf of Chelan County; Mr. R. M. Sturdevant, Prosecuting Attorney of Columbia County, on behalf of Columbia County; Mrs. Lillian A. Kenney, County Assessor, on behalf of Kittitas County; Mr. F. W. Hurd, County Assessor, on behalf of Klickitat County; Mr. G. B. Fore, County Assessor, on behalf of Okanogan County; Miss Fannie Dunwoodie, Chief Deputy Assessor, on behalf of Pend Oreille County; Mr. Wm. Gillings, County Assessor, on behalf of Stevens County, and Mr. L. D. Luce, County Assessor, on behalf of Yakima County.

At 12:00 m. the Board took recess until 3:00 p. m.

The Board reconvened at 3:00 p. m., all members present, Mr. C. W. Clausen presiding, for the purpose of taking up the matter of the assessment of the Port Townsend Southern Railroad Company, the hearing on said road having been postponed until this date. Mr. Ira Bronson appeared on behalf of the Port Townsend & Southern Railroad Company, and Mr. W. P. Elliott, County Assessor, appeared on behalf of Jefferson County.

Arguments were made by the representatives and after much discussion a motion was made by Mr. Savidge, which motion was carried, that this matter be made a special order before the Board of Equalization Friday afternoon at 2:30. It was suggested that Mr. Tanner, Attorney General, be asked to be present at this meeting, and upon being called by phone be consented to this arrangement.

Mr. Ralph A. McCotter, County Assessor of Franklin County, was present and desired to be heard. Hearing was granted Mr. McCotter on behalf of Franklin County.

The Board then adjourned to meet Friday, September 6, 1918, at 10:30 a. m.

FRIDAY, September 6, 1918.

The Board met at 10:30 a. m., with all members present, Clark V. Savidge presiding.

Minutes of the previous meeting read and approved.

Representatives from the Western Washington counties were heard as follows:

Mr. E. A. Prickett, County Assessor, on behalf of Clallam County; Mr. J. L. Garrett, County Assessor, on behalf of Clarke County; Mr. Sherman Hoover, County Assessor, on behalf of Grays Harbor County; Mr. Ernest E. Gaskill, County Assessor, on behalf of Island County; Mr. W. P. Elliott, County Assessor, on behalf of Jefferson County; Mr. J. F. Anderson, County Assessor, on behalf of Kitsap County; Mr. James McClure, County Assessor, on behalf of Lewis County; Mr. M. B. Schumacher, County Assessor, on behalf of Mason County; Mr. M. H. Leach, Chief Deputy Assessor, on behalf of Pacific County; Mr. J. J. Cameron, County Assessor, on behalf of Pierce County; and Mr. J. E. Russell, Chief Deputy Assessor, on behalf of Skagit County.

Mrs. Mabel Greer, Chief Deputy Assessor of Whitman County, was present and was granted a hearing before the Board at this time.

Mr. A. C. Sly, County Assessor, was heard on behalf of Skamania County.

At 12:00 m., the Board took recess until 1:30 p. m.

The Board reconvened at 1:30 p. m., all members present, Mr. Clark V. Savidge presiding.

The matter of the equalization of the assessment on the property of the Port Townsend Southern Railroad Company having been made a special order of business for this afternoon, this matter was first taken up, Honorable W. V. Tanner, Attorney General, being in attendance at the request of the members of the State Board of Equalization. After duly considering the questions in regard to this assessment it was decided to give notice to the parties in interest that further hearing would be given on the matter of increasing the valuation found by the State Tax Commissioner on the property of the Port Townsend Southern Railroad Company, said hearing to be held on Wednesday, September 11, 1918, at 2:00 p. m., and the Secretary was instructed to prepare and mail notices in accordance with the statute.

The hearing of counties was continued, the following representatives being heard:

Mr. William Whitfield, County Assessor, on behalf of Snohomish County; Mr. Alex Van Wyck, County Assessor, on behalf of Whatcom County; and Mr. John M. Thatcher, County Assessor, on behalf of King County.

The Seattle & Rainier Valley Railway Company was granted hearing at this time, said road being represented by Mr. John C. Higgins.

Board adjourned to 10:30 a. m. Saturday, September 7th.

SATURDAY, September 7, 1918.

The Board met at 10:30 a. m., with all members present, Chairman C. W. Clausen presiding.

The minutes of the previous meeting were read and approved.

The Board went into executive session for the purpose of fixing the valuations for assessment of steam and electric railways and telegraph lines.

At 12:00 m., recess was taken until 10:30 a. m., Monday, September 9th.

MONDAY, September 9, 1918.

The Board met at 10:30 a. m., with all members present, Chairman C. W. Clausen presiding.

The minutes of the previous meeting were read and approved.

The Board went into executive session for the purpose of continuing its work on valuations and equalization of assessment on property of steam and electric railways.

At 12:00 m. the Board adjourned until 2:00 p. m., Wednesday, September 11th.

WEDNESDAY, September 11, 1918.

Pursuant to adjournment, the Board met at 2:00 p. m., with all members present, Chairman C. W. Clausen presiding.

Minutes of previous meeting were read and approved.

The matter of the valuation of the Port Townsend Southern Railroad Company came on for hearing in accordance with notice given. Mr. W. P. Elliott, County Assessor, and Mr. Tom W. Holman, Prosecuting Attorney, appeared on behalf of Jefferson County, Mr. Ira Bronson, on behalf of the Port Townsend Southern Railroad Company, and at the request of the members of the Board of Equalization, W. V. Tanner, Attorney General, was present.

Inasmuch as the Board desired to hear a representative of the lessee company, the Port Townsend & Puget Sound Railway Company, in connection with the assessment of the property of the Port Townsend Southern Railroad Company, and no appearance had been made at this time in answer to notice served on said lessee company, a motion was made and carried that this matter be continued to Friday afternoon at 2:00 p. m., and the Tax Commissioner requested to subpoena the officers of the Port Townsend & Puget Sound Railway Company to be present and present evidence as to the ownership and character of the railroad property leased and operated by said lessee company.

A request for further hearing on behalf of Whitman County was received and Mr. M. C. True, County Assessor of said county, was advised that further hearing would be granted them on Friday, September 13th.

There being no further business, the Board adjourned to 2:30 p. m., September 12th.

THURSDAY, September 12, 1918.

Pursuant to adjournment, the Board met at 2:30 p. m., with all members present, Chairman C. W. Clausen presiding.

The minutes of the previous meeting were read and approved.

The Board went into executive session for the purpose of continuing its work on valuations and equalization of assessment of property in the several counties of the state.

Through the consent of the various parties, the hearing on the Port Townsend Southern Railroad Company, set for Friday afternoon, was postponed until Monday at 2:00 p. m.

The Board adjourned at 4:00 p. m., subject to the call of the Chairman.

FRIDAY, September 13, 1918.

A meeting of the Board was called by Chairman Clausen at 2:00 p. m., all members of the Board being present.

Minutes of previous meeting were read and approved.

Mr. C. L. MacKenzie of Colfax appeared before the Board on behalf of Whitman County, and presented evidence on property valuations in said county.

At 4:00 p. m., the Board adjourned to 9:30 a. m., September 14th.

SATURDAY, September 14, 1918.

Pursuant to adjournment, the Board met at 9:30 a. m., with all members present, Mr. C. W. Clausen presiding.

The minutes of the previous meeting were read and approved.

The Board went into executive session for the purpose of continuing its work on valuations, and the equalization of assessment of property in the several counties of the state.

At 11:00 a. m. the Board adjourned to 9:30 a. m., September 16th.

MONDAY, September 16, 1918.

The Board met at 9:30 a. m., with all members present, Chairman C. W. Clausen presiding.

Minutes of the previous meeting were read and approved.

The Board went into executive session for the purpose of continuing its work on valuations and equalization of assessments of property in the several counties of the state.

At 12:00 m. the Board adjourned to meet at the call of the Chairman.

C. E. Erickson and H. C. Belt, Vice President and Secretary respectively, of the Port Townsend & Puget Sound Railway Company, appeared before the Tax Commissioner at 2:00 p. m. pursuant to subpoenas issued by the Tax Commissioner, to give testimony relative to the ownership and valuation of certain improvements and extensions to the Port Townsend Southern Railroad Company's property made by the Port Townsend & Puget Sound Railway Company as lessee, and also as to the ownership and valuation of certain equipment operated by the Port Townsend & Puget Sound Railway Company. At said hearing were also present, H. B. Jones, representing the Port Townsend Southern Railroad Company; W. P. Elliott, County Assessor, and Tom W. Holman, Prosecuting Attorney, of Jefferson County, and Mr. Scott, City Attorney of Port Townsend, C. W. Clausen and Clark V. Savidge, members of the State Board of Equalization.

TUESDAY, September 16, 1918.

A meeting of the Board was called by Chairman Clausen at 9:30 a. m., all members being present.

The minutes of the previous meeting were read and approved.

The Board went into executive session for the purpose of continuing its work on valuations.

At 11:00 a. m. the Board took recess until 2:00 p. m.

The Board reconvened at 2:00 p. m., all members present, and Mr. C. W. Clausen presiding.

The Board went into executive session for the purpose of considering the valuation of the Port Townsend Southern Railroad Company and after having considered the testimony presented by the different parties in interest in relation to said road, it was moved by Mr. Jackson and duly seconded that the valuation of the real property of the Port Townsend Southern Railroad Company be fixed at \$281,015, that the valuation of the personal property of said company be fixed at \$23,275, and that the total valuation of the operating property of said company be fixed at \$304,290. Motion carried.

It was also moved by Mr. Jackson, and duly seconded, that the minutes of the State Board of Equalization show that in fixing the valuation of the Port Townsend Southern Railroad Company, the State Board of Equalization had found that the value of the improvements, extensions and equipment owned or claimed by the lessee, the Port Townsend & Puget Sound Railway Company, was \$29,100, and this amount was included in the valuation made upon the property of the Port Townsend Southern Railroad Company. Motion carried.

The Board adjourned at 4:30 p. m., to meet at the call of the Chairman.

WEDNESDAY, September 18, 1918.

A meeting of the Board was called by Chairman Clausen at 2:00 p. m., all members of the Board being present.

Minutes of the previous meeting were read and approved.

The Board went into executive session for the purpose of continuing the work of equalization.

Mrs. Josephine Corliss Preston, Superintendent of Public Instruction, met with the Board concerning the question of the school levy, and certified to the Board that the number of children of school age in the State of Washington on May 1st, 1918, was 336,237.

The Board adjourned at 3:00 p. m., to meet at the call of the Chairman.

THURSDAY, September 19, 1918.

The Board met at 10:00 a. m. in response to the call of the Chairman; present, C. W. Clausen, Chairman, Clark V. Savidge and Clark R. Jackson.

Minutes of the previous meeting were read and approved.

The Board went into executive session for the purpose of continuing with the work of equalization and fixing the state tax levy.

The matter of fixing the general fund levy was taken up, and it appearing that it was necessary to raise on account of the general fund from direct taxation the sum of \$1,864,689, a levy of 1.80 mills was fixed by unanimous vote of the Board.

The Superintendent of Public Instruction having certified to the Board that from the last report of the county superintendents the total number of children of school age in the state was 336,237, in accordance with the requirements of law, a levy of \$10.00 per school capita was made, which, after deducting \$1,041,867, estimated receipts from other sources, left \$2,320,503 to be raised by direct taxation. Therefore, the state school fund levy was fixed at 2.24 mills on the total valuation of the taxable property of the state, which levy amounts to \$2,320,503.

The total levy for the military fund was fixed at \$310,782, a rate of 0.30 mills.

A total levy for the state capitol building construction fund was fixed as required by law at \$517,969, a rate of 0.50 mills.

The total levy for the permanent highway fund was fixed as required by law at \$1,553,908, a rate of 1.50 mills.

The total levy for the public highway fund was fixed as required by law at \$1,035,939, a rate of 1.00 mill.

The total levies for the institutions of higher education were fixed as required by law at the following amounts: University of Washington, \$766,595, a rate of 0.74 mills; Washington State College, \$466,172, a rate of 0.45 mills; the Bellingham State Normal School, \$157,463, a rate of 0.152 mills; the Cheney State Normal School, \$134,672, a rate of 0.13 mills; the Ellensburg State Normal School, \$111,881, a rate of 0.108 mills.

On motion, the state tax for the general fund, amounting to \$1,864,689; for the state school fund, amounting to \$2,320,503; for the military fund, amounting to \$310,782; for the capitol building construction fund, amounting to \$517,969; for the permanent highway fund, amounting to \$1,553,908; for the public highway fund, amounting to \$1,035,939; for the University of Washington, amounting to \$766,595; for the Washington State College, amounting to \$466,172; for the Bellingham State Normal School, amounting to \$157,463; for the Cheney State Normal School, amounting to \$134,672; for the Ellensburg State Normal School, amounting to \$111,881, making a total of \$9,240,573, was levied and apportioned among the several counties of the state as indicated by Schedule E of this report.

On motion, Schedule A, showing the returns of personal property as equalized by the several county boards of equalization, Schedule B, showing the returns of real property as equalized by the several county boards of equalization, Schedule C, showing the valuation of the operating property of railroads, electric railways, and telegraph lines as revised, corrected and equalized by this Board, Schedule D, showing the total assessment of all taxable property in the State of Washington, and Schedule E, showing the total amount of taxes to be paid by each county, having been completed, were fixed and approved as hereinafter appended and are hereby made a part of the proceedings of this Board.

Adjournment was taken until 9:30 a. m., Saturday, September 21st.

SATURDAY, September 21, 1918.

The Board convened at 9:30 a. m. pursuant to adjournment, all members being present, and Chairman Clausen presiding.

The minutes of the previous meeting were read, discussed and approved.

There being no further business to come before the Board, on motion, the Board adjourned *sine die*.

C. W. CLAUSEN,

State Auditor and ex-officio Chairman of the Board;

CLARK V. SAVIDGE,

Commissioner of Public Lands;

CLARK R. JACKSON,

State Tax Commissioner and ex-officio Secretary of the Board.

SCHEDULES

SCHEDULE "A"—Table I.—Abstract of Assessment of Personal Property in the State of Washington, as Returned by the County Boards for the Year 1918.

COUNTIES	ONE YEAR OLD			TWO YEARS OLD			THREE YEARS OLD AND OVER			WORK HORSES			STALLIONS		
	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value
1 Adams	1,559	\$23,335	\$14.97	1,339	\$32,870	\$24.53	1,000	\$33,940	\$33.94	9,592	\$626,235	\$65.98	71	\$9,085	\$127.95
2 Asotin	523	9,775	18.69	501	11,840	23.63	1,831	64,910	35.19	1,751	96,623	60.92	26	8,475	133.65
3 Benton	706	10,475	14.84	524	12,410	23.68	489	14,765	30.19	1,751	96,623	60.92	26	8,475	133.65
4 Chelan	104	1,010	10.58	133	2,462	18.51	960	19,110	20.12	2,947	58,986	43.02	20	3,655	182.75
5 Chittam	163	2,365	14.59	140	2,946	21.05	408	12,075	29.86	616	34,986	56.86	8	580	116.87
6 Clarke	275	2,365	8.68	171	3,625	21.20	311	8,860	27.38	3,780	134,750	35.65	6	580	116.87
7 Columbia	628	6,900	10.99	654	11,430	17.48	941	23,880	25.38	4,184	182,530	43.62	29	6,545	228.38
8 Cowlitz	197	1,848	9.33	143	2,351	16.44	306	4,697	15.33	1,185	35,162	29.42	5	450	90.00
9 Douglas	1,976	24,370	12.33	1,635	31,758	19.47	1,692	46,102	27.25	10,963	494,824	40.66	74	11,050	149.32
10 Ferry	268	4,366	16.27	276	5,697	20.32	1,333	33,610	25.21	863	60,670	59.40	21	4,367	206.91
11 Franklin	653	8,455	12.95	542	17,782	19.82	1,356	33,610	25.21	2,449	101,124	46.18	43	6,210	144.42
12 Garfield	701	8,354	11.92	897	17,782	19.82	1,356	33,610	25.21	3,800	176,754	46.18	64	10,400	162.50
13 Grant	1,544	23,463	15.21	1,472	33,700	22.89	1,899	51,074	26.90	7,753	324,738	41.88	7	845	120.71
14 Grays Harbor	178	3,223	18.11	147	4,033	27.57	1,062	5,515	34.04	1,497	78,278	48.96	7	845	120.71
15 Island	35	643	18.37	42	930	22.62	208	4,556	21.91	554	23,212	41.90	15	337	84.25
16 Jefferson	25	365	14.60	18	490	27.22	61	1,006	26.31	520	22,168	42.68	4	887	84.25
17 King	525	10,815	20.60	560	16,884	30.15	3,320	140,800	40.00	8,362	692,688	82.85	86	17,200	200.00
18 Kittitas	10	130	13.00	14	248	17.71	1,218	10,377	19.98	3,300	10,630	36.10	1	200	200.00
19 Kootenai	1,131	19,255	17.02	906	22,335	24.76	1,218	39,555	32.48	2,563	184,450	64.65	28	3,985	142.82
20 Kootenai	619	8,884	14.35	590	13,500	22.92	3,068	82,130	26.51	2,578	132,568	51.43	25	3,185	127.40
21 Lewis	523	7,794	14.90	278	6,798	24.63	798	20,055	25.25	3,478	156,861	44.82	8	1,175	146.87
22 Lincoln	2,711	47,000	17.34	2,041	62,180	25.57	1,946	71,629	36.76	15,228	811,500	53.29	89	10,790	121.23
23 Mason	59	845	14.32	80	1,597	19.96	312	9,272	29.51	235	11,780	50.13	23	230	100.00
24 Okanogan	1,783	14,395	8.06	1,871	30,440	16.27	3,395	73,846	22.44	8,338	298,597	35.94	166	9,020	53.60
25 Pacific	4	668	14.95	40	510	12.75	107	8,197	29.98	658	32,505	49.40	25	240	96.00
26 Pend Oreille	62	573	14.68	38	848	22.42	106	3,400	33.38	941	53,255	56.39	40	4,005	222.50
27 Pierce	143	2,886	20.24	135	5,660	29.13	2,738	110,375	40.02	2,877	137,010	54.22	13	4,250	125.00
28 San Juan	143	938	21.29	65	1,860	29.06	351	10,860	31.20	465	97,412	58.15	3	310	108.33
29 Skagit	142	1,960	14.01	175	4,160	23.14	647	21,250	32.84	2,419	106,825	44.16	3	310	108.33
30 Skamania	9	1,160	17.78	12	238	24.83	144	2,073	14.40	336	14,350	42.71	4	440	110.00
31 Snohomish	71	1,125	15.62	174	4,185	23.19	846	28,310	33.38	2,700	112,440	41.61	4	440	110.00
32 Spokane	1,060	16,225	15.04	904	21,790	24.12	1,224	38,565	31.50	9,234	480,565	52.04	42	5,400	128.57
33 Stevens	954	9,955	10.45	1,000	14,053	14.05	2,018	39,733	19.69	4,461	160,275	36.38	29	1,840	63.83
34 Thurston	178	2,712	15.24	166	3,456	20.82	669	14,012	21.04	1,957	64,191	38.05	10	645	64.50
35 Wahkiakum	10	140	14.00	6	140	23.01	1	30	30.00	273	8,515	31.19	62	10,285	107.79
36 Walla Walla	822	15,165	17.00	873	21,130	24.20	1,021	44,000	37.14	6,066	372,688	46.00	62	10,285	107.79
37 Whitman	268	7,545	12.13	204	3,492	19.57	178	4,356	24.47	3,080	130,280	85.89	7	560	80.00
38 Yakima	3,016	75,545	25.05	2,738	109,226	30.02	1,077	60,000	50.10	21,060	1,241,320	58.94	112	10,706	176.94
39	1,922	24,640	12.82	2,880	71,500	24.75	2,063	113,270	37.07	7,832	440,470	57.30	80	6,060	171.14
Totals	25,792	\$307,292	\$15.40	21,401	\$493,290	\$23.05	41,921	\$1,390,683	\$33.19	140,318	\$8,015,791	\$57.10	1,100	\$163,073	\$139.50

Schedule "A"—Table 1.—Continued.

COUNTIES	2			YEARLINGS			TWO YEARS OLD			THREE YEARS OLD AND OVER			MILCH COWS		
	MULES AND ASSES			AVERAGE			AVERAGE			AVERAGE			AVERAGE		
	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value
1 Adams	1,689	\$90,820	\$54.80	2,268	\$33,455	\$14.76	1,413	\$27,420	\$19.41	1,860	\$39,670	\$25.11	2,426	\$59,730	\$24.62
2 Asotin	79	3,248	41.11	2,428	36,253	14.93	1,985	40,538	20.42	3,224	81,850	25.31	2,460	13,865	30.18
3 Benton	117	4,585	39.19	1,961	21,965	11.10	1,252	19,645	15.69	931	19,125	20.71	2,826	60,570	25.71
4 Chelan	250	13,552	54.21	1,118	11,215	10.03	712	12,532	17.60	642	12,835	28.08	2,069	68,560	30.72
5 Clallam	21	565	28.33	1,065	10,578	9.47	902	12,974	14.38	640	7,527	18.69	3,243	77,728	23.97
6 Clarke	132	4,940	37.42	3,534	22,725	6.43	2,467	31,070	12.63	917	18,435	20.10	10,550	238,945	22.46
7 Columbia	1,611	70,795	43.94	1,906	16,015	8.87	1,270	18,585	14.63	1,384	36,500	19.94	1,144	28,885	22.46
8 Cowlitz	12	288	24.00	1,976	8,629	4.37	1,415	10,900	7.75	572	5,913	10.34	4,049	67,089	14.07
9 Douglas	917	41,288	45.00	2,355	20,128	8.53	1,421	17,856	12.57	1,092	15,963	16.55	2,865	62,464	21.09
10 Ferry	111	4,076	36.72	2,187	32,683	14.84	1,357	29,984	22.10	1,699	25,095	27.44	1,580	49,272	32.90
11 Franklin	1,006	63,060	52.73	2,777	10,527	12.16	642	11,072	17.25	1,092	25,095	27.44	1,580	49,272	32.90
12 Garfield	460	16,802	36.53	2,177	22,258	10.21	1,946	27,982	14.38	2,864	54,200	18.92	454	16,044	35.34
13 Grant	654	20,005	36.11	2,004	26,373	12.53	1,185	27,198	16.98	1,357	40,368	24.65	2,984	77,848	25.92
14 Grays Harbor	19	460	24.21	1,649	15,700	9.48	583	7,987	13.52	458	8,066	17.69	4,849	114,503	26.23
15 Island	225	925	29.38	4,325	4,325	7.48	583	7,987	13.52	458	8,066	17.69	4,849	114,503	26.23
16 Jefferson	13	272	20.92	532	6,020	11.69	387	6,453	16.73	188	3,866	20.66	1,866	46,710	24.25
17 King	440	22,680	52.00	3,830	42,640	10.86	2,664	54,212	20.35	2,358	45,360	20.66	2,875	796,167	32.90
18 Kitsap	4	75	18.76	632	4,238	7.97	265	8,420	12.91	278	5,012	18.03	2,184	62,283	28.92
19 Kittitas	110	6,345	57.68	10,438	54,255	5.19	3,069	61,570	16.60	4,004	98,335	23.70	3,710	129,505	34.78
20 Klickitat	247	9,118	36.92	4,028	44,942	11.16	2,412	38,560	16.00	4,948	133,423	27.62	1,698	46,401	30.41
21 Lewis	100	3,563	35.86	6,122	60,101	9.82	3,027	44,009	14.74	1,831	35,384	19.30	12,888	344,612	27.88
22 Lincoln	1,795	98,885	55.09	4,400	54,470	12.88	3,421	69,220	14.61	8,421	69,220	19.86	4,681	117,080	25.27
23 Mason	2	100	50.00	608	5,208	8.50	488	7,019	14.44	454	8,371	18.43	1,808	82,655	24.96
24 Okanogan	342	12,385	36.21	12,914	166,345	12.80	6,325	140,160	29.32	10,346	278,570	26.93	3,960	126,102	31.92
25 Pacific	1	1,060	46.00	1,060	7,877	7.43	959	11,758	12.26	1,357	28,407	20.83	2,474	75,268	30.42
26 Pend Oreille	12	445	37.08	808	7,130	8.81	482	6,788	14.06	1,176	3,483	19.90	1,181	29,165	24.70
27 Pierce	40	3,000	63.03	1,834	22,125	12.06	1,876	38,960	20.76	1,446	39,435	27.57	10,384	349,380	25.00
28 San Juan	3	85	28.33	309	2,885	7.72	472	4,090	10.44	290	4,508	15.54	1,140	28,500	25.00
29 Skagit	14	296	21.07	2,864	20,865	7.27	2,348	31,865	13.56	2,560	51,620	20.16	9,624	237,555	24.68
30 Skamania	26	800	33.08	908	3,138	10.19	163	2,468	14.90	159	2,948	18.54	596	14,900	24.88
31 Snohomish	38	1,290	33.68	4,323	31,560	7.30	3,247	48,295	13.63	1,017	19,295	18.96	15,003	241,990	29.41
32 Spokane	424	21,490	50.66	4,594	48,745	10.61	9,291	48,900	16.63	1,725	43,566	25.27	7,590	234,190	31.10
33 Stevens	213	7,035	33.03	6,324	50,293	7.40	3,822	50,748	13.26	4,304	84,655	18.43	6,462	131,495	25.82
34 Thurston	25	1,475	59.00	3,170	23,923	7.40	1,435	17,390	12.06	1,269	24,185	19.06	5,455	128,464	25.88
35 Walla Walla	4,016	223,775	55.72	4,980	4,980	10.00	406	7,440	15.00	50	59	11.14	2,114	96,508	28.03
36 Waiilatpu	4,016	223,775	55.72	4,980	4,980	10.00	406	7,440	15.00	50	59	11.14	2,114	96,508	28.03
37 Whitman	2,307	139,745	60.57	4,305	32,432	7.53	3,160	37,200	11.78	2,167	169,335	29.87	14,574	349,308	23.69
38 Yakima	363	22,900	66.04	11,733	127,300	10.85	7,800	140,420	17.80	4,678	115,370	24.64	5,988	209,400	33.69
Totals	17,496	\$901,175	\$51.51	122,063	\$1,208,136	\$9.82	79,579	\$1,519,173	\$19.58	76,587	\$1,709,703	\$23.11	193,915	\$6,426,914	\$27.90

Schedule "A"—Table I.—Continued.

COUNTIES	BULLS FOR BREEDING PURPOSES			STOCK SHEEP AND GOATS			HOGS			POULTRY		DRAYS, TRUCKS, WAGONS AND SLEIGHS		
	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	Value	No.	No.	Value	Average value
1 Adams	139	\$2,190	\$23.12	21,079	\$104,445	\$4.96	5,320	\$23,150	\$4.35	\$8,455	1,449	27,075	\$18.69	1
2 Asotin	113	3,300	30.00	12,487	63,170	5.06	2,080	12,110	5.97	9,888	512	9,888	19.32	2
3 Benton	60	2,785	42.20	79,143	519,230	6.52	1,798	17,550	9.88	8,500	884	17,580	20.35	3
4 Chelan	75	2,455	35.07	1,481	6,883	4.65	1,735	12,895	7.43	4,730	1,683	23,737	15.00	4
5 Clallam	125	2,893	28.46	1,009	5,290	4.85	1,198	6,004	5.52	3,885	608	7,472	11.86	5
6 Clarke	317	6,690	21.01	3,324	16,290	4.90	2,592	95,595	10.11	9,785	1,919	29,385	11.66	6
7 Columbia	87	2,225	35.57	17,100	74,145	4.31	2,860	16,545	5.85	.....	1,170	17,640	15.06	7
8 Cowlitz	106	2,865	29.95	918	1,732	3.00	1,383	6,188	4.44	2,755	609	4,565	6.89	8
9 Douglas	96	3,014	50.95	2,652	1,672	3.95	3,755	22,667	6.07	13,568	2,655	42,842	16.70	9
10 Ferry	101	3,762	37.54	984	5,143	5.17	905	8,414	5.16	2,576	785	10,509	13.37	10
11 Franklin	19	662	85.89	46,875	250,081	5.45	1,249	8,414	6.45	5,214	753	10,509	16.30	11
12 Garfield	129	2,925	22.68	11,590	46,008	4.03	4,565	19,316	4.34	2,962	1,082	17,306	15.67	12
13 Grant	162	5,248	29.84	62,562	368,673	7.02	3,300	90,458	6.20	8,470	1,468	23,010	15.99	13
14 Grays Harbor	193	6,300	27.46	1,250	4,410	3.53	2,308	14,283	6.20	7,543	711	14,283	20.11	14
15 Island	55	1,147	20.85	1,661	7,112	4.46	405	4,877	8.84	7,740	200	3,128	12.08	15
16 Jefferson	80	3,460	43.25	238	1,180	5.00	659	8,915	9.94	2,257	252	4,979	19.76	16
17 King	715	39,465	51.00	2,473	13,045	5.27	4,381	30,927	7.00	56,800	6,490	229,896	35.80	17
18 Kitsap	42	1,822	31.43	244	1,068	4.38	856	4,455	5.20	14,387	540	4,410	8.17	18
19 Kittitas	388	10,325	26.95	49,476	228,740	6.64	2,549	19,010	7.46	540	1,655	34,330	20.65	19
20 Klickitat	183	5,655	30.90	52,087	316,362	6.08	6,176	35,272	5.39	7,263	1,249	19,806	15.90	20
21 Lewis	373	9,364	29.71	2,023	9,292	4.58	5,504	29,074	5.69	30,169	1,762	25,187	14.29	21
22 Lincoln	202	6,065	29.98	2,197	10,330	4.70	4,797	29,675	5.56	3,900	2,957	60,115	20.38	22
23 Mason	62	1,210	19.51	330	1,178	3.57	449	4,119	8.08	3,800	261	2,814	10.78	23
24 Okanogan	487	23,068	47.37	13,484	84,212	6.25	6,505	41,310	6.85	11,212	3,897	51,690	13.26	24
25 Pacific	138	3,295	24.25	282	1,150	4.06	659	2,927	5.84	1,648	374	4,865	13.69	25
26 Pend Oreille	48	1,318	27.46	164	633	3.86	379	2,688	6.85	1,726	700	12,965	18.31	26
27 Pierce	210	7,370	35.10	1,120	5,515	4.92	4,225	43,320	10.23	38,000	1,690	38,155	22.86	27
28 San Juan	611	977	18.86	998	26,330	5.00	357	2,900	8.39	1,980	240	9,200	9.42	28
29 Shagit	41	7,545	26.84	712	2,748	2.54	1,219	6,635	5.36	2,245	1,182	12,985	11.24	29
30 Shoshone	32	16,710	37.44	271	1,915	3.85	1,198	1,190	6.01	1,000	240	2,558	10.64	30
31 Spokane	609	7,300	49.11	1,560	10,510	6.74	2,928	14,745	6.62	16,980	1,581	25,085	12.93	31
32 Stevens	218	5,208	24.17	7,513	27,670	3.53	4,509	22,546	5.89	25,065	1,500	63,485	15.22	32
33 Thurston	169	4,736	25.80	1,752	6,043	3.84	2,022	14,661	4.68	11,010	4,500	35,440	11.78	33
34 Walla Walla	93	1,940	23.96	82	206	2.50	690	1,912	4.90	8,410	1,045	12,307	7.82	34
35 Waiilatup	145	4,013	27.68	31,473	146,127	4.64	7,077	33,960	5.07	7,679	2,692	41,065	15.26	35
36 Walla Walla	499	7,670	15.69	1,576	5,458	3.97	1,458	8,902	6.19	25,364	2,251	20,475	9.10	36
37 Whitman	48	8,776	99.22	20,147	97,135	4.82	18,183	117,625	6.47	24,980	3,083	68,565	18.88	37
38 Yakima	444	16,060	37.50	135,608	910,300	6.61	22,908	130,150	5.25	36,300	5,823	98,090	17.45	38
Totals	7,727	\$840,008	\$51.07	567,408	\$3,498,070	\$5.90	140,164	\$899,655	\$5.90	\$423,958	61,178	\$1,136,910	\$18.42	39

Schedule "A"—Table 1.—Continued.

COUNTIES	10			11			12			13			14			
	CARRIAGES, HACKS, BUGGIES, CUTTERS			BICYCLES			MOTORCYCLES			AUTOMOBILES			WATCHES			
	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	No.	Value	Average value	
1 Adams	523	\$6,825	\$13.05	17	\$125	\$7.35	8	\$905	\$124.88	1,076	\$208,100	\$198.40	210	\$1,150	\$5.45	
2 Asotin	205	4,302	11.26	16	110	6.88	2	50	25.00	814	67,983	83.44	32	328	10.25	
3 Benton	386	4,888	11.36	19	140	7.37	18	1,160	64.44	531	107,066	202.82	225	1,480	6.69	
4 Chelan	591	5,888	9.46	11	82	7.45	9	1,460	50.00	1,361	278,275	204.46	288	1,780	6.19	
5 Okanogan	168	1,588	9.42	34	305	8.97	23	1,317	57.30	1,394	125,682	125.16	201	1,298	6.40	
6 Clark	1,010	9,585	9.44	151	1,090	7.22	68	3,095	45.45	1,462	285,480	191.31	705	4,847	6.87	
7 Columbia	483	4,910	10.08	74	1,055	7.50	5	440	88.00	1,501	139,285	248.24	189	1,065	5.68	
8 Douglas	805	7,624	9.46	11	72	6.55	2	23	11.60	298	43,207	149.61	97	278	2.87	
9 Grant	893	8,384	9.38	19	72	3.79	9	258	28.66	1,131	244,067	215.80	886	1,412	1.61	
10 Ferry	908	8,385	11.00	3	15	5.00	1	125	125.00	91	83,191	211.41	91	508	5.58	
11 Franklin	172	1,655	9.62	25	155	6.20	4	180	45.00	388	83,077	219.36	182	1,096	5.91	
12 Garfield	836	4,582	11.55	1	4	4.00	2	40	20.00	628	124,846	238.45	188	1,067	5.68	
13 Grant	685	5,240	9.84	16	108	6.74	6	533	88.68	945	170,808	232.13	283	1,445	5.06	
14 Grays Harbor	167	1,888	11.34	248	1,508	6.08	46	2,018	43.87	2,040	480,878	235.72	1,567	9,670	6.15	
15 Island	35	350	10.00	.....	.....	.....	3	175	58.33	287	37,685	141.14	10	60	6.00	
16 Jefferson	102	1,179	11.56	13	97	7.46	14	582	42.29	271	54,413	240.79	232	1,851	7.95	
17 King	1,640	47,660	29.00	205	2,060	10.00	550	33,000	60.00	21,184	9,597,040	450.00	8,200	118,080	14.40	
18 Kitsap	167	970	5.81	9	38	4.22	1	68	68.00	613	124,002	202.29	223	987	4.43	
19 Kittitas	657	9,705	14.77	84	290	7.65	11	475	43.18	1,048	395,750	255.75	597	1,915	7.45	
20 Klickitat	719	7,729	10.75	15	125	8.33	9	452	50.22	617	139,544	228.17	467	2,586	5.55	
21 Lewis	725	7,885	10.88	190	1,203	6.36	26	1,040	40.00	1,073	340,025	208.24	440	4,548	10.33	
22 Lincoln	988	11,180	11.94	11	70	6.36	20	580	29.00	2,000	485,540	243.27	300	1,890	6.32	
23 Mason	108	963	9.35	17	109	6.41	9	307	34.11	227	37,460	165.02	88	503	5.71	
24 Okanogan	1,502	15,175	10.10	19	105	5.53	7	400	57.14	922	185,457	201.15	487	2,000	4.68	
25 Pacific	118	1,607	13.62	17	90	5.29	8	205	25.68	380	80,980	212.95	184	1,018	5.53	
26 Pend Oreille	210	2,210	10.52	8	35	4.38	4	210	52.50	178	33,513	189.96	145	1,018	5.53	
27 Pierce	409	5,045	12.33	320	3,335	11.05	569	82,840	54.91	7,292	2,235,819	305.61	6,576	79,170	12.04	
28 San Juan	146	1,282	8.89	1	3	3.00		116	18,477	189.28	12	88	7.33	29	30	3.00
29 Skagit	189	2,005	11.05	13	110	9.17	2	65	32.50	1,544	246,065	169.37	95	425	4.45	
30 Skamania	134	1,140	8.51	3	15	5.00	2	70	35.00	81	16,885	207.84	36	435	12.08	
31 Spokane	898	8,845	10.10	158	1,035	6.56	68	2,655	45.78	3,316	815,580	245.96	1,083	8,080	6.80	
32 Spokane	1,421	13,090	12.71	567	4,680	7.16	293	13,700	53.82	9,945	2,238,180	280.58	6,080	38,000	6.30	
33 Stevens	.....	.....	.....	88	940	6.82	12	1,087	27.50	1,946	145,665	167.15	503	2,055	4.09	
34 Thurston	605	5,192	8.57	114	699	6.09	35	1,307	30.40	1,180	244,314	216.13	490	2,055	4.09	
35 Walla Walla	42	308	7.33	.....	.....	.....	52	770	148.56	82	7,740	148.56	4	55	1.37	
36 Walla Walla	528	5,705	10.80	119	580	4.90	20	1,305	65.25	2,812	695,200	257.87	574	8,868	6.74	
37 Whitman	817	6,302	6.49	279	1,302	4.67	127	4,306	33.91	3,122	581,116	179.73	1,980	7,910	6.23	
38 Whitman	1,478	18,180	12.30	22	1,170	7.73	17	1,066	62.65	3,279	885,385	284.97	7,719	4,800	6.11	
39 Yakima	2,484	25,840	10.40	183	1,300	6.91	51	2,060	40.58	4,945	1,314,540	255.88	1,286	8,800	6.22	
Totals.....	22,146	\$277,080	\$12.51	8,019	\$22,101	\$7.82	2,061	\$107,624	\$52.94	78,847	\$80,140,811	\$266.44	34,204	\$519,045	\$9.88	

Schedule "A"—Table I.—Continued.

COUNTIES	15			16			17	18			19	20	21
	ORGANS			PIANOS, AUTOMATIC AND ELECTRIC PIANOS AND ORCHESTRIONS				SEWING MACHINES					
	No.	Value	Average value	No.	Value	Average value		No.	Value	Average value			
1 Adams	120	\$1,000	\$8.83	340	\$19,380	\$57.00	\$2,705	620	\$4,270	\$6.89	\$47,100	\$3,165	\$5,770
2 Asotin	40	983	24.58	173	13,680	79.08	1,120	257	1,765	6.87	31,710	1,345	3,068
3 Benton	61	785	12.21	330	19,925	60.38	2,075	523	3,455	6.61	76,645	3,485	6,145
4 Blaine	40	740	12.33	784	45,025	57.43	3,625	848	5,195	6.13	123,205	4,820	14,275
5 Clallam	47	984	20.51	470	25,820	54.91	2,249	630	3,924	6.23	53,294	5,567	6,145
6 Clarke	426	8,510	8.24	1,295	60,188	46.46	11,248	2,090	19,737	7.34	204,545	9,290	11,250
7 Columbia	51	545	10.69	325	15,750	48.46	1,290	474	2,615	5.92	48,420	1,340	3,445
8 Cowlitz	94	411	4.89	316	11,872	37.57	342	575	1,918	3.36	96,720	798	3,527
9 Douglas	180	1,323	7.35	489	29,866	60.95	4,102	1,232	5,732	4.65	57,910	2,402	4,204
10 Ferry	20	206	10.25	127	8,118	63.92	796	236	1,669	6.90	37,910	2,705	3,468
11 Franklin	16	313	19.56	255	14,328	56.19	1,568	869	3,091	6.89	43,224	1,768	2,222
12 Garfield	56	524	9.36	199	12,370	62.16	2,010	371	2,462	6.64	88,324	2,416	4,374
13 Grant	149	1,707	11.46	316	18,505	58.56	2,060	943	5,577	6.91	92,765	4,512	6,915
14 Grays Harbor	3	256	95.00	1,348	83,405	61.87	13,867	1,751	11,055	6.31	225,605	17,865	42,340
15 Island	32	338	10.55	107	4,100	38.82	2,105	113	1,885	6.06	11,740	1,110	173
16 Jefferson	52	592	11.38	219	15,183	69.33	2,105	405	2,997	7.40	38,337	2,819	2,535
17 King	1,720	40,420	23.50	17,960	1,924,240	107.20	143,580	28,182	312,831	11.10	5,789,800	229,420	980,210
18 Kitsap	93	1,640	17.68	366	15,415	42.12	1,515	764	2,858	3.66	33,065	2,842	3,380
19 Kittitas	79	1,215	15.38	655	56,900	86.72	3,065	1,017	8,970	8.43	147,700	9,120	11,635
20 Klickitat	196	1,815	9.26	494	29,876	64.39	4,424	1,063	5,782	5.29	74,785	3,841	4,484
21 Lewis	486	7,465	15.36	1,108	86,601	80.33	7,183	2,409	17,547	7.28	229,220	7,198	17,712
22 Lincoln	107	1,146	10.70	773	62,565	68.03	6,715	1,296	9,000	6.98	125,975	4,400	11,000
23 Mason	62	897	14.47	160	9,137	57.11	1,240	443	2,517	5.68	17,840	2,795	1,675
24 Okanogan	186	1,563	8.40	735	34,635	47.12	3,843	1,878	10,377	5.63	92,357	5,312	6,512
25 Pacific	46	425	9.24	317	18,722	59.05	3,340	464	2,653	5.72	52,340	5,342	8,060
26 Pend Oreille	45	850	7.78	157	10,880	68.98	743	356	2,048	5.75	29,755	1,647	1,897
27 Pierce	1,072	23,660	22.07	8,673	918,440	105.90	44,505	15,840	168,775	10.65	2,417,150	109,065	348,550
28 San Juan	27	3,297	121.74	125	5,118	40.94	405	81	1,357	5.56	47,150	109,065	348,550
29 Skagit	25	290	18.90	395	18,940	49.19	265	145	2,290	5.50	106,955	6,540	1,430
30 Skamania	34	220	6.47	77	4,170	54.16	585	146	680	4.69	8,845	148	1,108
31 Snohomish	412	5,560	13.47	2,992	216,965	74.69	25,375	4,309	36,710	8.52	597,385	81,150	96,410
32 Spokane	650	7,090	10.91	9,894	613,690	62.09	102,735	11,043	85,195	7.71	2,456,995	84,250	280,195
33 Stevens	202	2,045	7.81	580	27,088	46.17	4,838	1,125	7,898	6.72	99,038	5,680	5,200
34 Thurston	236	2,287	11.08	982	59,500	50.58	8,509	2,269	15,392	6.73	189,892	11,304	11,531
35 Wahkiakum	5	30	6.00	61	2,915	47.79	60	66	241	4.17	4,738	105	1,445
36 Walla Walla	84	3,308	46.40	1,267	68,176	64.17	9,765	1,313	7,758	5.90	244,035	16,406	20,745
37 Whitman	11	14,000	25.24	3,158	137,076	43.47	9,470	5,038	24,860	4.94	375,086	13,468	33,282
38 Yakima	202	3,120	11.68	2,983	170,870	59.27	20,780	5,380	80,240	7.30	642,930	25,140	30,370
Totals	8,105	\$1,937,907	\$17.02	62,259	\$5,632,040	\$90.95	\$403,340	100,472	\$677,005	\$63.53	\$16,239,311	\$748,185	\$1,079,192

Schedule "A"—Table I—Continued.

COUNTIES	22	23	24	25	26	27	28	29	30	31	32
	Diamonds, jewelry, firearms, clothing, etc.	Agricultural implements, machinery and harness	Mechanics' tools and im- plements	Royalties and patent rights, annuities, etc.	Thrashing machines, hay presses, traction engines, etc.	Donkey and logging engines, etc.	Steam- boats, sailing vessels, launches, dredges, etc.	Lumber	Saw logs	Shingles and lath	Sash, doors, mouldings, and pillars, etc.
1 Adams	\$6,270	\$108,815	\$9,927	\$1,435	\$65,065	\$24,160	.....	\$6,543	\$430	\$940	\$2,140
2 Asotin	513	19,700	2,418	108	15,665	8,148	\$80	9,118	70	.....	.....
3 Benton	4,430	45,900	11,585	1,275	14,580	95	1,725	20,510	.....	1,500	2,000
4 Bellingham	4,618	59,065	3,546	75	2,587	10,640	9,225	42,805	19,880	3,265	1,070
5 Chelan	351	11,664	4,578	.....	2,974	154,295	17,475	30,081	30,375	2,400	1,115
6 Clallam	3,955	57,980	11,125	135	19,280	33,070	8,706	17,485	18,285	1,890	4,115
7 Clatsop	1,925	54,160	8,570	.....	40,105	.....	.....	1,610	.....	80	75
8 Columbia	380	14,417	8,468	.....	4,418	120,048	18,385	9,570	52,682	1,071	802
9 Cowlitz	1,866	127,728	8,286	24	114,383	3,366	2,804	1,068	.....	1,116	180
10 Ferry	1,868	22,214	3,863	.....	5,047	1,040	1,626	17,768	6,766	315	1,875
11 Franklin	1,075	28,506	4,360	3,610	39,413	2,640	2,668	2,665	25	72	466
12 Garfield	3,100	113,610	4,788	30	6,320	70	500	448	.....	372	752
13 Grant	3,820	74,777	6,190	700	5,197	399,470	103,170	582,762	221,857	52,877	10,200
14 Grays Harbor	51,092	20,752	13,880	355,000	6,197	7,427	3,600	2,175	38,657	1,150	.....
15 Island	18	8,065	460	.....	3,250	47,640	56,448	20,133	8,057	950	75
16 Jefferson	3,747	7,461	1,380	5	968	425,210	2,280,130	565,440	120,000	70,400	46,740
17 King	266,100	100,450	136,450	1,062,475	86,200	11,435	1,270	30,050	19,825	1,850	1,000
18 Kitsap	805	5,295	650	.....	1,118	13,540	1,655	106,885	2,345	1,906	1,800
19 Kittitas	4,745	82,375	4,465	.....	29,775	10,453	1,670	8,210	8,914	222	200
20 Klickitat	2,679	61,108	5,319	20	27,242	152,979	2,482	21,331	4,390	8,310	926
21 Lewis	3,668	59,869	22,294	137	23,542	97,985	1,280	137,168	.....	.....	.....
22 Lincoln	6,625	216,290	12,405	2,785	211,560	124,652	18,248	800	14,340	200	7,600
23 Mason	996	7,662	2,402	.....	2,185	4,545	2,858	1,000	3,995	498	24
24 Okanogan	4,378	180,200	14,615	.....	23,728	196,758	85,380	224,835	59,240	18,967	250
25 Pacific	3,415	8,820	4,143	.....	2,087	2,230	1,900	419,267	72,210	5,505	200
26 Pend Oreille	1,040	10,887	2,622	.....	2,840	.....	.....	23,685	23,685	23,685	122,080
27 Pierce	87,240	42,840	73,180	1,840	6,920	177,335	266,325	388,185	44,545	200	250
28 San Juan	420	4,812	1,085	.....	4,580	6,538	61,092	50	9,225	3,865	1,385
29 Skagit	.....	41,515	6,450	.....	12,845	60,920	17,840	17,700	9,125	.....	.....
30 Skamania	1,697	5,297	1,006	17	1,407	38,775	2,170	6,900	27,010	8,800	8,800
31 Snohomish	30,200	52,595	20,820	55	6,765	406,990	40,525	440,805	59,500	69,940	5,945
32 Spokane	89,800	178,685	41,670	4,185	81,700	61,850	2,465	116,470	28,200	4,466	5,045
33 Stevens	3,685	62,238	6,530	10	13,677	7,865	1,375	13,182	56,867	3,072	730
34 Thurston	6,639	27,232	11,547	142	11,193	59,589	17,256	143,161	10,897	4,286	3,000
35 Wahkiakum	60	2,662	2,066	.....	665	79,250	23,231	85,300	9,050	957	27,005
36 Walla Walla	10,460	145,212	12,513	102,982	102,982	6,197	26,175	144,822	22,148	957	37
37 Whatcom	6,040	42,196	19,776	.....	65,845	67,596	246,804	144,822	22,148	.....	19,166
38 Whitman	288,790	258,790	22,870	500	65,845	108,290	.....	82,590	19,760	6,490	10,820
39 Yakima	22,980	239,060	57,420	500	60,810	6,520	2,140	82,590	19,760	6,490	10,820
Totals	\$949,973	\$2,550,190	\$651,012	\$1,434,523	\$1,182,398	\$2,066,826	\$3,856,767	\$6,654,769	\$1,025,178	\$252,189	\$252,189

Schedule "A"—Table 1.—Continued.

COUNTIES	33	34	35	36	37	38	39	40	41	42	43
	Wood, coal, wool, hides, etc.	Goods and merchandise, including fixtures and appliances	Manufacturers' materials, manufactured articles, etc.	Manufacturers' tools, implements, machinery, etc.	Theatre furniture and motion picture machines	Capital stock of incorporated banks	Money	Stock and fixtures of billiard rooms, etc.	Furniture and fixtures of hotels, restaurants, lodging houses	Hay, grain and other products in hands of producers	Hay, grain and other products in farm and warehouse, elevator or cold storage
1 Adams	\$8,900	\$900,145	\$10,275	\$1,145	\$1,380	\$190,915	\$825	\$1,815	\$2,780	\$5,200	\$438,964
2 Asotin		71,808	398	13,675	300	23,735		640	600	6,435	26,788
3 Benton	1,760	219,255		925	900	71,550		4,500	3,025	9,300	9,200
4 Chelan	5,700	536,445	72,685	63,000	1,670	80,886		8,125	17,568	16,147	68,756
5 Chittenden		105,904	475	185,968	2,450	30,168		2,010	12,855		
6 Clarke	12,250	318,565	78,100	865,270	1,480	128,889	52,065	2,765	11,065	735	19,905
7 Columbia	2,685	128,844	3,975	3,630	128,844	149,701		700	1,140	39,572	142,282
8 Cowlitz		114,254	3,894	138,030	847	21,000		555	2,458		
9 Douglas	1,022	258,400	5,020	4,830	1,170	86,938		2,906	1,968	19,634	288,457
10 Ferry	37	84,031	4,616	82,610	925	22,569	2,974	947	1,525	558	2,827
11 Franklin	645	150,555	2,750	10,375	213	68,579	1,830	1,975	8,505	4,240	214,680
12 Grant	364	122,331	1,800	1,580	50	74,762		798	1,100	8,700	7,888
13 Grant	9,847	210,255	905	3,065	7,295	79,330	17,410	4,175	5,855	68,432	279,260
14 Grays Harbor	340	846,290	4,115	1,177,975	6,365	384,340		12,440	85,107	4,602	877
15 Island		32,350		17,155		12,000		187	237	3,277	
16 Jefferson	821	109,717	6,984	80,356		62,500	1,330	825	2,500	60	30
17 King	78,900	13,600,730	505,820	2,337,000	50,410	4,279,629	108,130	78,400	870,800	42,300	6,020
18 Kitsap	1,107	149,350	12,500	108,365	2,885	91,340	1,785	1,715	12,270	35	
19 Kittitas	40,345	442,400	8,035	64,385	875	107,375		2,070	30,200	108,225	89,245
20 Klickitat	230	137,000	9,505	42,588	825	66,844		2,435	3,907	16,568	168,621
21 Lewis	850	460,383	9,397	330,501	4,958	300,000		3,310	26,145	7,290	747
22 Lincoln	12,500	462,045	26,300	28,705	2,565	287,405	3,270	9,500	7,965	60,160	766,400
23 Mason	40	82,822	30	8,062	75	21,046		116	3,227		
24 Okanogan	2,882	249,132	6,700	47,778	1,578	124,415		3,535	9,555	7,780	25,850
25 Pacific	196	188,013	18,307	301,483	1,112	99,045	225	4,980	12,688	300	887
26 Pend Oreille	3,022	69,905	42,500	58,285	775	24,450		1,937	3,200	2,762	50
27 Pierce	56,710	3,829,009	796,455	2,384,190	65,345	1,010,357	18,675	26,630	262,130	4,770	395,290
28 San Juan	1,235	69,353	2,800	47,622	1,500	20,500	2,810	2,300	913	855	
29 Skagit	15	427,800	18,400	905,065	5,800	149,585		5,295	8,735	7,100	145
30 Skamania	3,112	29,062	15,007	127,007	137,007	3,300		337	5,075	75	
31 Snohomish	10,375	1,231,615	76,335	1,048,340	11,329	377,005	95	12,450	54,070	31,970	4,425
32 Spokane	68,050	6,184,900	283,365	402,075	15,500	1,979,880	7,075	43,025	379,130	55,385	168,140
33 Stevens	6,155	248,255	70,475	324,082	2,687	89,035		2,827	7,970	10,225	1,485
34 Thurston	12,382	314,333	152,065	300,749	25,800	124,500	275	2,272	10,650	4,001	294
35 Wabikium	375	17,685	20,668	22,020		1,050		500	625		
36 Walla Walla	21,855	755,200	53,242	60,007	6,400	735,902		6,482	17,805	38,075	304,076
37 Whitcom	2,804	872,372	297,587	588,060	27,700	985,724		5,538	27,134	1,714	1,740
38 Whitman	7,880	737,065	165,575	588,060	27,700	731,369		4,815	23,710		198,110
39 Yakima	15,000	1,631,410	6,970	6,340	2,310	532,870		10,110	42,000	139,300	288,160
Totals	\$674,320	\$65,628,285	\$1,941,805	\$11,095,861	\$233,737	\$12,641,103	\$627,304	\$675,290	\$1,070,897	\$719,900	\$4,024,194

Schedule "A"—Table I—Concluded.

COUNTIES	44 Elevators, warehouses, or other improvements on lands of U. S. R. R. Co., etc.	45 Improvements on lands held under the laws of U. S. or leased from state	46 Property of gas, electric light, power, water, telephone companies including franchises	47 Fish traps and locations	48 Value of timber held separately from land	49 Leaseholds	50 All other items of personal property	TOTALS		
								Aggregate value of property, as equalized by county board	Aggregate value of exemptions	Aggregate value taxable personal property, as equalized by county board
1 Adams	\$87,385	\$2,025	\$70,025			\$1,235	\$12,455	\$2,581,725	\$189,200	\$2,482,585
2 Asotin		10,198	107,708			40		872,404	80,850	791,554
3 Benton	25,680	1,000	112,080				2,040	1,653,540	198,510	1,460,080
4 Bellingham	70,970	10,125	321,775				13,290	2,264,668	239,452	1,965,211
5 Chelan		11,241	120,527				68,126	1,213,812	164,899	1,049,413
6 Clarke	13,270	3,045	212,120				44,335	2,676,979	640,960	2,086,020
7 Columbia	21,570	1,880	82,044				7,745	1,419,323	138,465	1,280,858
8 Cowlitz	53,738	573	98,449				18,009	989,383	75,980	788,373
9 Douglas	12,112	68,610	68,610				3,654	2,220,183	224,983	1,985,297
10 Ferry	13,678	415	20,754				988	670,614	97,426	673,188
11 Franklin	20,875	60	166,015				300	1,456,683	112,982	1,343,731
12 Garfield	27,948	2,243	27,048				1,070,831	2,393,804	248,235	2,085,569
13 Grant	42,225	9,245	298,170				6,844,955	6,844,955	464,755	5,080,200
14 Grays Harbor	47,450	12,810	3,680				3,382	888,047	82,387	805,660
15 Island		4,012	100,970				95,080	900,641	81,080	818,661
16 Jefferson	3,280	746,200	3,280				50,166,019	8,891,880	41,363,089	17,523,008
17 King	1,025	14,020	119,320				1,131,023	1,131,023	175,023	956,000
18 Kitsap	87,180	5,768	468,085				2,841,920	2,841,920	222,600	2,619,320
19 Kittitas	52,988	7,175	166,101				2,832,023	2,832,023	215,047	2,616,976
20 Klickitat	10,968	18,706	18,706				66,821	3,424,483	660,107	2,774,383
21 Lewis	17,175	19,000	154,475				117,977	4,890,994	839,782	4,051,212
22 Lincoln	40,450		56,548				1,080	606,198	96,700	419,498
23 Mason	49,520	47,008	81,477				11,068	2,896,853	459,293	2,137,560
24 Okanogan	12,785	9,625	91,813				3,573	1,969,686	111,450	1,848,236
25 Pacific	9,675	11,827	34,567				122,397	1,027,750	96,555	931,195
26 Pend Oreille	1,070	128,190	3,805,455				62	22,041,447	4,755,015	17,286,432
27 Pierce	256,610		16,425				386,455	467,370	68,235	389,135
28 San Juan		6,235	173,480				3,725	3,080,885	276,740	2,764,145
29 Skagit	730	1,175	176,371				4,210	607,021	34,500	572,521
30 Skamania		9,960	519,850				1,295	7,396,045	1,065,580	6,330,465
31 Snohomish	6,700	3,080	2,825,760				87,015	20,392,980	8,315,405	13,077,575
32 Spokane	593,680	7,972	382,427				47,385	2,943,208	472,338	1,970,865
33 Stevens	21,175	8,510	184,440				33,182	2,665,158	412,087	2,273,071
34 Thurston	646	8,510	3,325				176,915	4,104,504	40,510	3,964,004
35 Wahkiakum	1,515	8,383	231,744				65,022	4,732,490	354,000	4,388,490
36 Walla Walla	94,132	223,169	223,169				63,550	5,601,598	902,264	4,709,334
37 Whitcom	107,062	27,940	220,904				19,375	7,515,848	790,080	6,725,763
38 Yakima	107,495	9,350	643,470				14,520	8,769,860	1,291,200	7,478,660
39 Totals	\$1,983,681	\$1,182,580	\$15,984,072	\$659,652	\$1,659,773	\$607,925	\$1,600,976	\$155,950,204	\$25,145,088	\$137,802,116

SCHEDULE "A"—Table II.

Abstract of Assessment of All Personal Property in the State of Washington
for the Year 1918.

No. of Item	DESCRIPTION OF PROPERTY	Number	Assessed value	Average value
1	Horses: { One year old.....	25,792	\$307,232	\$15 40
	{ Two years old.....	24,461	503,290	24 25
	{ Three years old and over.....	44,521	1,369,983	30 77
	{ Work horses.....	106,219	8,015,731	49 11
	{ Stallions.....	1,108	153,973	139 59
2	Mules and Asses.....	17,496	901,175	51 51
3	Stock Cattle: { Yearlings.....	122,963	1,208,136	9 82
	{ Two years old.....	79,579	1,519,173	16 36
	{ Three years old and over.....	76,587	1,769,708	23 11
4	Milk Cows.....	198,915	6,426,914	27 99
5	Bulls, kept for breeding purposes.....	7,727	240,093	31 07
6	Stock Sheep and Goats.....	587,408	3,468,076	5 96
7	Hogs.....	140,164	839,056	5 99
8	Poultry.....		423,963	
9	Drays, Trucks, Wagons and Sleighs.....	61,178	1,126,910	18 42
10	Carriages, Cabs, Hacks, Buggies and Cutters.....	22,146	277,080	12 51
11	Bicycles.....	3,019	22,101	7 32
12	Motorcycles.....	2,081	107,524	52 94
13	Automobiles.....	78,847	20,140,811	255 44
14	Watches.....	34,204	319,045	9 33
15	Organs.....	8,106	137,907	17 02
16	Pianos, Automatic and Electric Pianos and Orchestrions.....	62,256	5,082,046	80 53
17	Band Instruments, Violins, Phonographs and Musical Boxes.....		463,346	
18	Sewing Machines.....	100,472	837,005	8 53
19	Household Furniture, including clocks, rugs, gold and silver plate, paintings, statuary, engravings, etc.		15,238,311	
20	Libraries, Books, Scientific Instruments, etc.....		748,965	
21	Office Furniture, Safes, Typewriters, Adding Machines, Cash Registers, etc.....		1,979,402	
22	Diamonds, Jewelry, Firearms, Clothing, etc.....		649,973	
23	Agricultural Implements, Machinery and Harness.....		2,650,190	
24	Mechanics' Tools and Implements.....		651,012	
25	Royalties, Patent Rights, Annuities, etc.....		1,434,523	
26	Threshing Machines, Hay Presses, Traction Engines, etc.....		1,182,338	
27	Donkey and Logging Engines, Pile Drivers, Hoisting Engines, etc.....		2,696,326	
28	Steamboats, Sailing Vessels, Launches, Dredges, Barges, Ferries, Row Boats, etc.....		\$,356,757	
29	Lumber (M. feet).....		3,054,759	
30	Saw Logs (M. feet).....		1,022,178	
31	Shingles and Lath (M.).....		292,189	
32	Sash, Doors, Mouldings, Pillars, Finishing Lumber, etc.....		292,199	
33	Wood, Coal, Wool, Hides, etc.....		374,820	
34	Goods and Merchandise, including fixtures and appliances used in business.....		35,658,235	
35	Manufacturers' Materials and Manufactured Articles, including brick, stone, building material, etc.....		2,943,805	
36	Manufacturers' Tools, Implements and Machinery, including engines and boilers.....		11,925,861	
37	Theatre Furniture and Motion Picture Machines.....		253,737	
38	Capital Stock of Incorporated Banks.....		12,641,168	
39	Money.....		217,204	
40	Stock and Fixtures of Billiard and Pool Rooms, Bowling Alleys, etc.....		275,230	
41	Furniture and Fixtures of Hotels, Restaurants, Lodging Houses.....		1,976,857	
42	Hay, Grain and other farm products in hands of producers.....		716,996	

Schedule "A"—Table II.—Concluded.

No. of item	DESCRIPTION OF PROPERTY	Number	Assessed value	Average value
43	Hay, Grain and other farm products in warehouse, elevator or cold storage.....		\$4,624,158	.....
44	Elevators, Warehouses, or other improvements on lands, the title of which is vested in any railroad company, or other person, firm or corporation...		1,963,681	.....
45	Improvements on lands held under the laws of the United States, or leased from the State.....		1,159,530	.....
46	Property of Gas, Electric Light, Power, Water, Tele- phone and other public service concerns, includ- ing franchises		15,984,072	.....
47	Fish Traps and Locations.....		959,652	.....
48	Value of timber held separately from land.....		1,659,773	.....
49	Leaseholds		597,925	.....
50	All other items of personal property.....		1,080,976	.....
	Aggregate value of personal property as equalized by County Board.....		\$185,950,204	.....
	Aggregate value of exemptions under section 5 of Law		28,148,068	.....
	Aggregate value of taxable property as equalized.....		\$157,802,116	.....

SCHEDULE "B."

Abstract of Assessment of Real Property in the State of Washington, as Returned
by the County Boards for the Year 1918.

COUNTIES	Total number of acres of land, ex- clusive of town and city lots	Number of acres fenced	Number of acres of timber lands	Number of acres of other unim- proved lands	Number of acres of improved lands	
1 Adams	1,112,130	1,105,850		308,367	808,198	1
2 Asotin	245,222	200,000		156,669	88,613	2
3 Benton	808,471			780,340	28,131	3
4 Chelan	581,436	98,080	28,860	502,320	80,225	4
5 Clallam	553,239	18,064	380,139	165,045	18,064	5
6 Clarke	369,297	170,000	18,360	282,537	68,400	6
7 Columbia	358,450	181,581		176,875	181,581	7
8 Cowlitz	629,183	71,470	262,265	848,278	18,360	8
9 Douglas	953,713	834,704		480,542	528,171	9
10 Ferry	179,342	40,470	64,541	96,829	17,972	10
11 Franklin	682,288	487,159		338,492	343,791	11
12 Garfield	320,480	326,480		174,608	151,912	12
13 Grant	1,434,596	698,629		961,065	468,451	13
14 Grays Harbor	520,506		418,869	384,110	22,507	14
15 Island	120,382	21,308	7,760	98,529	14,093	15
16 Jefferson	282,208	7,058	169,533	105,599	7,071	16
17 King	824,502		307,700	492,702	64,100	17
18 Kitsap	223,871	25,940	43,829	167,740	12,302	18
19 Kittitas	802,137	250,000	175,792	572,345	114,000	19
20 Klickitat	944,660	406,384	224,911	531,791	167,968	20
21 Lewis	606,864	107,027	429,686	472,156	65,073	21
22 Lincoln	1,345,160	1,620,768		559,639	786,521	22
23 Mason	410,689		166,863	243,208	10,518	23
24 Okanogan	650,081	433,354	71,575	437,084	141,372	24
25 Pacific	542,698		312,068	221,882	8,653	25
26 Pend Oreille	505,535	32,375	211,238	275,409	18,888	26
27 Pierce	628,946		290,537	286,178	50,235	27
28 San Juan	105,851	70,334		90,351	15,000	28
29 Skagit	568,735		231,004	266,349	66,292	29
30 Skamania	237,555	17,423	191,479	40,043	6,033	30
31 Snohomish	567,913	49,496	158,913	308,109	40,896	31
32 Spokane	997,515	672,965	70,165	550,980	376,420	32
33 Stevens	1,065,718	206,110	180,563	787,965	97,230	33
34 Thurston	425,306		160,560	237,641	27,075	34
35 Wahkiakum	149,576	7,800	52,680	92,796	4,100	35
36 Walla Walla	754,850	717,470		231,754	523,086	36
37 Whatcom	410,392	79,321	95,632	251,870	62,860	37
38 Whitman	1,257,554	1,246,725		298,675	968,879	38
39 Yakima	775,267			642,965	130,272	39
Totals.....	24,638,516		4,710,637	13,354,331	6,578,548	

Schedule "B"—Continued.

COUNTIES		Valuation of timber lands as equalized by county boards		Valuation of other unimproved lands as equalized by county boards		Valuation of improved lands as equalized by county boards		
		Average value per acre	Total value	Average value per acre	Total value	Average value per acre	Total value	
1	Adams			\$5 67	\$1,116,785	\$12 96	\$10,473,880	1
2	Asotin			8 00	470,007	23 14	2,050,113	2
3	Benton			4 41	3,444,200	62 71	1,764,125	3
4	Chelan	\$9 42	\$186,473	2 01	1,010,982	122 11	6,133,050	4
5	Challam	22 44	8,529,210	7 10	968,380	30 47	550,095	5
6	Clarke	83 76	619,773	9 56	2,701,787	36 58	2,502,240	6
7	Columbia			2 67	454,280	27 56	5,001,920	7
8	Cowlitz	16 12	4,228,357	3 83	1,160,082	28 32	529,472	8
9	Douglas			2 96	1,288,465	12 77	6,679,965	9
10	Ferry	5 67	306,218	9 24	865,024	15 32	275,296	10
11	Franklin			3 07	1,088,969	7 24	2,490,271	11
12	Garfield			2 04	513,335	16 21	2,462,585	12
13	Grant			2 46	2,360,280	10 07	4,665,825	13
14	Grays Harbor	31 46	18,020,135	6 28	2,410,868	41 96	944,355	14
15	Island	30 36	235,620	8 13	801,065	32 10	452,410	15
16	Jefferson	23 11	3,918,320	6 44	680,090	35 41	250,394	16
17	King	19 10	5,875,980	21 70	9,820,908	188 54	12,085,537	17
18	Kitsap	22 16	971,142	13 51	2,266,524	36 35	447,230	18
19	Kittitas	4 25	747,116	1 06	960,092	44 84	5,111,777	19
20	Klickitat	5 68	1,278,819	3 24	1,222,138	16 54	3,109,185	20
21	Lewis	17 45	7,498,382	4 95	2,355,277	61 88	2,070,957	21
22	Lincoln			2 00	1,119,182	17 70	13,525,112	22
23	Mason	20 42	3,202,545	3 71	902,155	19 17	201,590	23
24	Okanogan	3 89	242,080	3 89	1,067,825	15 79	2,231,506	24
25	Pacific	21 88	6,827,977	5 67	1,258,095	40 56	350,996	25
26	Pend Oreille	7 01	1,480,946	3 04	837,243	19 00	358,898	26
27	Pierce	20 79	6,040,040	14 61	4,182,280	104 06	5,227,275	27
28	San Juan			2 50	225,873	32 27	484,102	28
29	Skagit	15 75	3,640,155	6 98	1,868,315	60 38	3,990,596	29
30	Skamania	12 19	2,333,512	11 04	442,265	48 12	290,823	30
31	Snohomish	28 06	4,457,470	13 34	4,911,715	58 92	2,205,116	31
32	Spokane	5 45	382,586	4 41	2,430,510	22 71	8,548,075	32
33	Stevens	4 41	796,440	3 23	2,548,248	17 53	1,704,277	33
34	Thurston	17 16	2,756,169	7 74	1,888,265	22 18	600,398	34
35	Wahkiakum	11 50	606,080	2 96	274,400	11 36	46,580	35
36	Walla Walla			4 25	964,955	21 00	10,983,230	36
37	Whatecom	19 76	1,890,129	13 02	3,279,432	41 07	2,598,066	37
38	Whitman			4 61	1,376,500	23 40	22,430,900	38
39	Yakima		68,910	2 43	1,556,260	97 58	12,705,760	39
Totals		\$17 45	\$82,102,068	\$5 25	\$70,117,264	\$24 18	\$158,983,761	

Schedule "B"—Concluded.

COUNTIES	Valuation of improvements on land as equalized by county boards		Valuation of city and town lots (exclusive of improvements) as equalized by county board	Valuation of improvements on city and town lots as equalized by county board	Aggregate valuation of all real property, including improvements (except steam and electric railways) as equalized by county board
	Average value per acre	Total value			
1 Adams	\$0 78	\$632,635	\$272,778	\$710,166	\$13,306,223
2 Asotin	4 31	361,845	396,355	392,820	3,661,140
3 Benton	11 54	324,760	422,290	444,920	6,400,365
4 Obelan	16 88	847,660	1,412,497	1,396,230	10,686,972
5 Olallam	11 01	198,760	1,753,368	438,866	12,628,668
6 Clarke	16 28	1,113,670	2,684,700	1,868,620	11,440,660
7 Columbia	1 06	804,660	213,360	478,500	6,432,410
8 Cowlitz	14 28	265,411	432,353	340,566	6,963,740
9 Douglas	1 01	626,275	178,577	398,660	9,061,982
10 Ferry	10 62	189,969	136,598	146,278	2,008,412
11 Franklin	30	108,960	515,084	417,776	4,566,109
12 Garfield	1 66	252,855	145,480	242,600	3,616,796
13 Grant	1 50	686,745	294,740	408,920	5,421,510
14 Grays Harbor	39 96	969,235	3,616,966	2,969,236	23,860,744
15 Island	10 53	145,635	97,133	77,910	1,809,788
16 Jefferson	33 08	238,530	709,443	503,089	6,294,866
17 King	68 21	4,372,110	127,623,242	49,840,700	209,618,432
18 Kitsap	46 96	677,555	1,786,106	661,457	6,709,013
19 Kittitas	5 41	617,015	1,370,677	1,566,360	10,362,087
20 Klickitat	3 58	672,068	464,664	480,229	7,715,046
21 Lewis	11 86	771,343	1,708,196	1,533,186	13,917,790
22 Lincoln	1 96	1,584,430	361,278	1,232,884	18,172,831
23 Mason	11 34	119,300	99,926	120,170	4,646,686
24 Okanogan	4 65	667,960	360,566	396,045	5,675,230
25 Pacific	49 04	415,665	1,333,194	836,330	11,021,256
26 Pend Oreille	22 46	424,800	164,815	287,370	3,564,042
27 Pierce	55 37	2,781,430	29,876,815	15,240,875	68,348,666
28 San Juan	21 10	316,480	59,690	90,300	1,176,440
29 Skagit	13 13	874,025	1,318,125	1,073,520	12,763,735
30 Skamania	21 71	130,960	82,786	63,250	3,298,066
31 Snohomish	39 37	1,609,966	7,847,320	4,627,580	26,669,196
32 Spokane	5 66	2,128,975	33,086,837	30,366,245	76,969,327
33 Stevens	10 75	1,045,424	360,900	423,806	6,906,094
34 Thurston	22 60	611,808	1,667,468	1,326,588	8,790,669
35 Wahkiakum	36 18	148,840	44,290	46,970	1,166,360
36 Walla Walla	21 00	1,217,875	4,622,845	3,870,800	21,679,706
37 Whatcom	19 62	1,046,320	4,685,401	3,579,303	17,012,680
38 Whitman	1 60	1,633,960	1,400,190	2,506,570	29,317,170
39 Yakima	26 09	3,390,430	3,757,736	3,997,706	25,489,860
Totals	\$6 19	\$34,122,928	\$237,280,529	\$185,419,062	\$718,065,597

SCHEDULE "C"—Table I.—STEAM RAILROADS.—Abstract of Assessment of the Operating Property of Steam Railroads, Electric Railways and Telegraph Lines in the State of Washington, as Revised, Corrected and Equalized by the State Board of Equalization for the Year 1918.

BELLINGHAM & NORTHERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value
Whatcom.....	Main Line	35.40	23.100	\$23,250 00	\$337,075	\$3,230 50	\$100,125	\$3,968 69	\$92,354	\$32,659
	Main Track .....	.....	20.376	4,650 00	94,748	1,646 10	33,541	798 74	16,373	5,761
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Branch Lines—	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Main Track .....	.....	37.808	13,650 00	527,422	4,988 30	186,707	2,309 21	90,599	32,071
Totals.....	Sidings .....	.....	8.727	2,822 00	33,290	823 00	7,182	389 37	3,435	1,234
	Totals.....	.....	90.011	.....	\$1,179,585	.....	\$417,555	.....	\$302,610	\$71,724
									\$1,882,145	\$489,279

BLAKELY RAILROAD.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value
Mason.....	Main Line	38.30	14.580	\$5,800 00	\$80,144	\$2,604 40	\$67,972	\$2,418 38	\$35,230	\$13,493
	Main Track .....	.....	.....	1,800 00	516	280 89	315	483 27	230	111
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....			15.180	.....	\$80,660	.....	\$68,285	.....	\$35,460	\$13,604
									\$134,374	\$13,605
									1,100	424
									\$135,480	\$13,999

CANADIAN PACIFIC RAILWAY (Equipment only).

COUNTIES	CLASSIFICATION OF TRACK	Asst'd ratio actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Equal- ized rate per mile	Equal- ized rate per mile	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Actual value	Equalized value	
King.....	(On line N. P. Ry.)....	46.00	25.854	.....	.....	.....	\$710 54	\$18,370	\$26 85	\$88,450	\$18,370	\$88,450
Skagit.....	(On line N. P. Ry.)....	30.20	29.828	.....	.....	.....	710 54	20,537	214 58	6,293	20,537	6,293
Shoshone.....	(On line N. P. Ry.)....	40.40	42.585	.....	.....	.....	710 54	30,229	287 06	12,210	30,229	12,210
Whatcom.....	(On line N. P. Ry.)....	33.40	29.950	.....	.....	.....	710 54	20,570	251 53	7,292	20,570	7,292
Totals.....	Totals.....	.....	126.665	.....	.....	.....	.....	\$90,000	.....	\$84,235	\$90,000	\$84,235

COWLITZ, CHEHALIS & CASCADE RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value
Lewia.	Main Line	35.30	18.320	\$7,500 00	\$137,400	\$2,047 50	\$48,502	\$1,644 20	\$80,122	\$107,522	\$30,135
	Main Track		1.150	1,800 00	1,725	629 50	609	328 84	378	2,108	743
	Sidings										
	Totals.....		19.470		\$139,125		\$49,111		\$80,500	\$109,625	\$30,878

Schedule "C"—Table I.—Steam Railroads—Continued.
CHICAGO, MILWAUKEE & ST. PAUL RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Adams.....	Main Line.....	42.00	74.516	\$76,704 36	\$5,715,702	\$32,215 83	\$2,400,506	\$7,527 91	\$500,950	\$6,161 72	\$235,569	\$6,276,632	\$2,686,194
	Main Track.....		19.755	15,340 88	303,069	6,443 17	127,256	1,505 58	29,743	632 34	12,462	332,802	139,777
	Sidings.....												
	Branch Lines—												
	Main Track.....		29.595	15,340 88	454,014	6,443 17	190,686	1,505 58	44,559	632 34	18,714	468,572	200,400
Benton.....	Sidings.....		2.486	3,885 22	9,534	1,610 79	4,004	376 40	955	159 09	368	10,469	4,397
	Totals.....		126.352		\$6,482,309		\$2,722,570		\$630,186		\$287,108	\$7,118,466	\$2,989,768
	Branch Lines.....	48.00	29.561	\$15,340 88	\$438,151	\$6,596 58	\$196,405	\$1,505 58	\$43,001	\$947 40	\$18,490	\$481,152	\$206,895
	Main Track.....		2.375	3,885 22	9,109	1,649 14	3,917	376 40	894	161 85	884	10,003	4,301
	Sidings.....												
Grant.....	Totals.....		30.936		\$447,200		\$192,322		\$43,895		\$18,374	\$461,155	\$211,196
	Main Line.....	39.50	30.660	\$76,704 36	\$2,811,982	\$30,296 23	\$1,110,733	\$7,527 91	\$275,973	\$2,973 52	\$109,006	\$3,087,955	\$1,219,742
	Main Track.....		5.661	15,340 88	86,845	6,039 65	34,304	1,505 58	8,523	594 70	3,367	95,368	37,671
	Sidings.....												
	Branch Lines—												
Grays Harbor.....	Main Track.....		32.983	15,340 88	505,988	6,039 65	199,865	1,505 58	49,658	594 70	19,615	555,646	219,480
	Sidings.....		3.311	3,885 22	12,688	1,514 91	5,016	376 40	1,246	148 68	492	13,944	5,568
	Totals.....		76.615		\$3,417,513		\$1,349,918		\$385,400		\$132,458	\$3,802,913	\$1,462,401
	Grays Harbor B'ch.....	35.00	2.181	\$7,670 44	\$16,729	\$2,914 77	\$0,337	\$762 80	\$1,642	\$296 08	\$924	\$18,371	\$6,961
	Sidings.....												
King.....	Main Line.....	46.00	51.873	\$76,704 36	\$3,978,885	\$35,294 01	\$1,890,287	\$7,527 91	\$890,466	\$3,462 84	\$179,693	\$4,369,380	\$2,009,915
	Main Track.....		51.681	15,340 88	702,005	7,066 80	364,350	1,606 58	77,786	662 87	35,756	886,800	400,108
	Sidings.....												
	Everett Branch—												
	Main Track.....		84.080	26,846 53	914,808	12,849 40	420,621	2,634 77	89,740	1,211 90	41,280	1,004,138	461,901
	Sidings.....		4.418	7,670 44	38,688	3,628 40	15,568	702 80	3,326	846 26	1,830	37,214	17,116
	Totals.....												
	Grays Harbor B'ch.....	35.00	2.181	\$7,670 44	\$16,729	\$2,914 77	\$0,337	\$762 80	\$1,642	\$296 08	\$924	\$18,371	\$6,961
	Sidings.....												
	Main Line.....	46.00	51.873	\$76,704 36	\$3,978,885	\$35,294 01	\$1,890,287	\$7,527 91	\$890,466	\$3,462 84	\$179,693	\$4,369,380	\$2,009,915
	Main Track.....		51.681	15,340 88	702,005	7,066 80	364,350	1,606 58	77,786	662 87	35,756	886,800	400,108
	Sidings.....												
	Everett Branch—												
	Main Track.....		84.080	26,846 53	914,808	12,849 40	420,621	2,634 77	89,740	1,211 90	41,280	1,004,138	461,901
	Sidings.....		4.418	7,670 44	38,688	3,628 40	15,568	702 80	3,326	846 26	1,830	37,214	17,116

White River Branch— Main Track	16,035 3,166	19,176 08 3,855 22	307,488 12,142	8,821 00 1,764 20	141,445 5,585	1,881 97 376 40	30,177 1,192	865 71 178 14	13,882 548	387,665 13,384	155,827 6,133
Sidings											
Totals	161,188		\$9,038,861		\$2,777,876		\$62,665		\$272,626	\$6,631,826	\$3,050,502
Main Line	38.50										
Main Track	90,020	\$76,704 38	\$6,950,949	\$29,531 18	\$2,676,115	\$7,627 91	\$2,898 25	\$2,898 25	\$282,689	\$7,633,128	\$2,988,754
Sidings	25,773	15,340 88	395,381	5,906 24	182,222	1,505 58	579 65	579 65	14,930	434,184	167,161
Branch Lines—											
Main Track	7,041	15,340 88	108,015	5,906 24	41,586	1,505 58	579 65	579 65	4,081	118,618	45,667
Sidings	.342	3,835 22	1,312	1,476 56	505	376 40	129	144 91	50	1,441	555
Totals	123,776		\$7,455,657		\$2,870,428		\$731,712		\$281,709	\$8,187,369	\$3,182,187
Pend Oreille..											
Idaho & Washington Northern Branch	40.60										
Main Track	70,763	\$96,846 53	\$1,809,741	\$10,809 69	\$771,295	\$2,634 77	\$1,099 71	\$1,099 71	\$75,686	\$2,084,185	\$846,901
Sidings	9,362	7,670 44	76,566	3,114 20	31,686	762 80	7,514	306 64	3,061	84,060	34,137
Totals	80,745		\$1,976,307		\$802,981		\$163,965		\$79,747	\$2,170,265	\$881,128
Main Line	46.50										
Main Track	13,069	\$76,704 36	\$697,847	\$35,607 33	\$463,969	\$7,627 91	\$3,500 48	\$3,500 48	\$45,588	\$1,065,778	\$509,537
Sidings	43,949	15,340 88	674,216	7,133 51	313,511	1,505 58	66,169	700 09	30,768	740,385	344,279
Grays Harbor B'ch—											
Main Track	.880	26,846 53	23,625	12,483 64	10,966	2,634 77	2,319	2,225 17	1,078	25,944	12,064
Sidings	.409	7,670 44	3,130	3,566 75	1,455	762 80	307	350 05	143	3,437	1,566
Totals	58,246		\$1,036,818		\$789,951		\$166,726		\$77,527	\$1,865,544	\$367,478
Snohomish...											
Everett Branch	40.40										
Main Track	20,878	\$96,846 53	\$590,502	\$10,846 00	\$226,443	\$2,634 77	\$65,009	\$1,064 45	\$22,224	\$615,511	\$248,667
Sidings	13,270	7,670 44	117,197	3,088 88	47,347	762 80	11,692	304 13	4,647	128,689	51,994
Totals	36,157		\$677,699		\$273,790		\$66,511		\$26,871	\$744,210	\$300,661
Spokane....											
Main Line	30.30										
Main Track	13,498	\$76,704 36	\$1,035,326	\$30,144 81	\$406,865	\$7,627 91	\$101,612	\$2,959 47	\$39,983	\$1,136,908	\$446,828
2nd Main Track	1,965	23,011 31	45,271	9,043 44	17,770	2,258 37	4,438	887 54	1,744	49,655	19,514
Sidings	6,692	15,340 88	102,661	6,028 97	40,346	1,505 58	10,075	591 69	3,980	112,736	44,306
Coeur d'Alene B'ch—											
Main Track	12,260	19,176 08	235,069	7,536 20	92,384	1,881 97	23,073	739 61	9,088	258,172	101,462
Sidings	3,602	3,835 22	13,815	1,507 24	5,429	376 40	1,366	147 86	583	15,171	5,962
Totals	38,017		\$1,432,148		\$32,834		\$140,554		\$55,238	\$1,572,702	\$318,072
Thurston....											
Grays Harbor B'ch..	40.00										
Main Track	32,382	\$96,846 53	\$968,589	\$10,738 61	\$347,419	\$2,634 77	\$85,240	\$1,053 91	\$34,096	\$658,779	\$381,512
Sidings	13,281	7,670 44	101,871	3,068 18	40,748	762 80	9,968	301 12	3,969	111,869	44,747
Totals	45,663		\$970,410		\$388,164		\$95,238		\$38,065	\$1,065,648	\$426,259

Schedule "C"—Table 1.—Steam Railroads—Continued.
CHICAGO, MILWAUKEE & ST. PAUL RAILWAY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Rate per mile, actual value	Actual value	Equalized rate per mile	Rate per mile, actual value	Actual value	Equalized rate per mile	Actual value	Equalized value
Whitman.....	Main Line.....	38.70	\$76,704.36	\$4,491,040	\$29,684.58	\$7,527.91	\$440,759	\$2,913.30	\$4,031,799	\$1,908,006
	Main Track.....		15,340.88	240,008	5,988.92	1,505.58	23,555	592.60	293,543	101,909
	Sidings.....									
	Totals.....			\$4,731,048			\$464,314		\$5,195,392	\$2,010,906
Yakima.....	Branch Lines.....	46.30	\$15,340.88	\$156,216	\$7,102.88	\$1,505.58	\$15,331	\$997.05	\$171,547	\$79,426
	Main Track.....									
	Sidings.....									
Totals.....	Main Line—									
	Main Track.....	338.726	\$76,704.36	\$25,981,781		\$7,527.91	\$2,549,899		\$28,531,680	\$11,669,576
	2nd Main Track.....	1.965	23,011.31	45,217		2,239.87	4,438		49,655	19,514
Idaho & Washington Northern Branch—	Main Track.....	169.106	15,340.88	2,594,235		1,505.58	254,008		2,848,888	1,235,901
	Sidings.....									
	Sidings.....									
Everett Branch—	Main Track.....	70.763	26,846.58	1,899,741		2,634.77	186,444		2,085,185	846,901
	Sidings.....	9.982	7,670.44	76,566		752.80	7,514		84,089	34,137
	Sidings.....									
Grays Harbor B'ch—	Main Track.....	54.938	26,846.58	1,474,856		2,634.77	144,749		1,619,644	710,598
	Sidings.....	19.697	7,670.44	151,085		752.80	14,828		165,913	69,112
	Sidings.....									
White River Branch—	Main Track.....	33.232	26,846.58	892,164		2,634.77	87,559		979,723	308,576
	Sidings.....	15.870	7,670.44	121,780		752.80	11,947		133,677	56,329
	Sidings.....									
Coeur d'Alene B'ch—	Main Track.....	16.085	19,176.06	307,498		1,893.97	30,177		337,665	155,327
	Sidings.....	8.166	3,885.22	12,142		376.40	1,192		13,334	6,133
	Sidings.....									
Other Branch Lines	Main Track.....	12.290	19,176.06	233,099		1,893.97	23,073		259,172	101,492
	Sidings.....	3.602	3,885.22	13,915		376.40	1,356		15,171	5,992
	Sidings.....									
Totals.....	Main Track.....	108.303	15,340.88	1,692,394		1,505.58	169,149		1,825,598	700,989
	Sidings.....	8.514	3,885.22	22,068		376.40	8,204		30,897	14,701
	Sidings.....									
	Totals.....			\$10,749,175			\$1,161,132		\$11,499,781	\$10,076,614

EQUIPMENT (ONLY) OVER FOREIGN LINES.

Adams.....	42.00	Main Line.....	\$7,827 91	\$144,611	\$6,161 72	\$80,737	\$144,611	\$80,737
		(Over O.-W. R. R. & N. Co.)	1,505 58	5,285	682 84	2,220	5,285	2,220
		Main Track.....						
		Sidings.....						
		Totals.....	22,720	\$149,896		\$82,957	\$149,896	\$82,957
Grays Harbor.....	38.00	Grays Harbor B'ch.....						
		(Over O.-W. R. R. & N. Co.)						
		Main Track.....	4,688	\$12,378	\$1,001 21	\$4,704	\$12,378	\$4,704
		2nd Main Track.....	1,850	1,625	459 10	579	1,625	579
		Sidings.....	13,988	10,588	286 06	4,004	10,588	4,004
		(Over N. P. Ry. Co.)						
		Main Track.....	43,000	113,582	1,001 21	43,142	113,582	43,142
		2nd Main Track.....	1,680	1,983	459 10	703	1,983	703
		Sidings.....	15,770	11,872	286 06	4,511	11,872	4,511
		Totals.....	80,556	\$151,708		\$57,645	\$151,708	\$57,645
King.....	46.00	Main Line.....						
		(Over Pacific Coast R. R.)						
		Main Track.....	20,855	\$153,306	\$6,462 84	\$70,521	\$153,306	\$70,521
		2nd Main Track.....	10,301	28,268	1,068 85	10,701	28,268	10,701
		Sidings.....	8,135	12,248	692 57	5,684	12,248	5,684
		(Over O.-W. R. R. & N. Co.)						
		Main Track.....	3,340	25,143	3,462 84	11,596	25,143	11,596
		2nd Main Track.....	3,100	7,001	1,068 85	3,220	7,001	3,220
		Sidings.....	3,680	5,556	692 57	2,556	5,556	2,556
		White River Branch—						
		(Over White River Logging Co.)						
		Main Track.....	1,900	5,006	1,211 99	2,303	5,006	2,303
		Terminals—						
		(Over N. P. Ry. Co.)						
		Sidings.....	1,855	2,798	692 57	1,285	2,798	1,285
		Totals.....	52,683	\$234,316		\$107,786	\$234,316	\$107,786
Lincoln.....	41.30	Main Line.....						
		(Over O.-W. R. R. & N. Co.)						
		Main Track.....	7,000	\$62,686	\$8,109 06	\$21,764	\$62,686	\$21,764
		Sidings.....	1,350	2,082	621 80	889	2,082	889
		Totals.....	8,350	\$64,728		\$22,653	\$64,728	\$22,653

Schedule "C"—Table I.—Steam Railroads—Continued.
CHICAGO, MILWAUKEE & ST. PAUL RAILWAY—Concluded.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Pierce.....	Grays Harbor B'ch. (Over Tacoma East. R. R.)	46.50											
	Main Track		28.186					\$2,634 77	\$8,994 7,810	\$1,225 17 350 06	\$32,082 3,632	\$48,994 7,810	\$82,082 3,632
	Sidings—		10.375					752 80					
	Terminals— (Over N. P. Ry. Co.)		.616					1,505 58	927	700 00	431	927	431
	Totals		37.177						\$77,731		\$96,145	\$77,731	\$96,145
Snohomish...	Terminals (Over N. P. Ry. Co.)	40.40											
	Sidings		1.211					\$1,505 58	\$1,898	\$408 25	\$755	\$1,898	\$755
Spokane.....	Main Line (Over O.-W. R. R. & N. Co.)	39.80											
	Main Track		92.570					\$7,527 91	\$305,742	\$2,956 47	\$155,527	\$305,742	\$155,527
	2nd Main Track		1.290					2,259 37	2,913	887 54	1,145	2,913	1,145
	Sidings		8.170					1,505 58	12,301	591 69	4,834	12,301	4,834
	Terminals— (Over N. P. Ry. Co.)		.463						727	501 00	286	727	286
	Sidings							1,505 58					
	Totals		92.513						\$411,688		\$101,702	\$411,688	\$101,702
Thurston...	Grays Harbor B'ch. (Over O.-W. R. R. & N. Co.)	40.00											
	Main Track		1.750					\$2,634 77	\$4,611	\$1,063 01	\$1,845	\$4,611	\$1,845
	Sidings		1.240					752 80	988	301 12	373	988	373
	Totals		2.990						\$5,599		\$2,218	\$5,599	\$2,218

[illegible]

GREAT NORTHERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value
Chelan.....	Main Line	40.90										
	Main Track	66.664	\$68,869 22	\$5,924,378	\$36,347 51	\$2,423,070	\$6,006 38	\$73,736	\$3,520 01	\$234,688	\$1,468,114	\$2,657,728
	Sidings	30.000	17,773 84	706,560	7,269 50	238,570	1,721 28	68,328	704 00	27,946	773,878	316,516
	Branch Lines—											
	Main Track	51.429	26,600 76	1,871,056	10,904 25	500,762	2,581 91	122,777	1,066 00	54,306	1,503,833	616,008
	Sidings	4.572	4,443 46	20,315	1,817 88	8,309	480 32	1,938	176 00	806	22,298	9,114
	Totals	162.358		\$8,021,299		\$3,280,711		\$776,809		\$317,715	\$8,708,108	\$3,366,426
Douglas.....	Main Line	38.40										
	Main Track	15.370	\$68,869 22	\$1,366,720	\$34,125 79	\$624,821	8,006 38	\$122,357	\$3,304 85	\$50,825	\$1,490,077	\$375,446
	Sidings	3.561	17,773 84	68,268	6,825 15	24,304	1,721 28	61,120	680 97	2,384	69,422	28,638
	Branch Lines—											
	Main Track	60.839	26,600 76	1,692,014	10,237 73	692,833	2,581 91	157,081	991 45	60,319	1,779,086	688,172
	Sidings	5.703	4,443 46	25,841	1,706 28	9,731	430 32	2,454	165 24	82,942	27,765	10,673
	Totals	86.462		\$8,077,808		\$1,181,706		\$986,021		\$114,440	\$3,375,389	\$1,206,140

Schedule "C"—Table I.—Steam Railroads—Continued.
GREAT NORTHERN RAILWAY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Ferry.....	Branch Lines	45.50	68.616	\$26,660 76	\$1,820,354	\$12,130 65	\$2,661 91	\$177,100	\$1,174 77	\$90,006	\$2,006,515	\$912,964
	Main Track		15.920	4,443 46	70,140	2,021 77	450 32	6,861	195 80	5,117	77,991	35,304
	Sidings											
	Totals		84.536		\$1,900,065			\$184,011		\$95,725	\$2,084,100	\$948,268
Grant.....	Main Line	39.50	57.968	\$68,969 22	\$5,150,348	\$35,108 35	\$3,003 38	\$499,067	\$4,389 62	\$197,131	\$5,662,415	\$2,282,704
	Main Track		18.601	17,773 84	330,611	7,020 67	1,721 28	32,018	679 91	12,647	362,629	143,238
	Sidings											
	Totals		76.569		\$5,480,959			\$531,085		\$209,778	\$6,015,044	\$2,475,942
King.....	Main Line	46.00	45.168	\$69,869 22	\$4,014,045	\$40,879 84	\$3,006 38	\$388,733	\$3,968 98	\$173,817	\$4,402,778	\$2,025,278
	Main Track		14.677	26,660 76	868,634	12,263 95	2,661 91	37,637	1,187 68	17,813	426,271	186,083
	Sidings		56.702	17,773 84	1,007,812	8,175 97	1,721 28	97,600	791 79	44,896	1,106,412	508,490
	Totals		116.447		\$5,410,491			\$523,970		\$241,026	\$5,934,461	\$2,729,853
Lincoln.....	Main Line	41.30	64.918	\$68,869 22	\$5,769,212	\$36,702 99	\$3,003 38	\$558,709	\$3,554 43	\$230,746	\$6,327,921	\$2,613,481
	Main Track		14.906	17,773 84	264,937	7,840 60	1,721 28	25,657	710 86	10,697	280,694	120,106
	Sidings											
	Totals		79.824		\$6,034,149			\$584,366		\$241,843	\$6,618,515	\$2,733,447
Okanogan.....	Branch Lines	40.20	133.282	\$69,869 22	\$3,532,600	\$10,717 08	\$2,661 91	\$344,045	\$1,087 92	\$138,806	\$3,880,646	\$1,506,451
	Main Track		17.941	4,443 46	79,720	1,766 27	450 32	7,750	172 99	3,104	87,440	35,151
	Sidings											
	Totals		151.198		\$3,682,320			\$351,795		\$141,400	\$3,984,085	\$1,601,602
Pend Oreille..	Main Line	40.60	14.703	\$68,969 22	\$1,311,976	\$36,080 90	\$3,006 38					
	Main Track		4.675	17,773 84	81,315	7,216 18	1,721 28	\$127,056	\$3,494 19	\$51,086	\$1,439,082	\$684,247
	Sidings							7,875	968 84	3,197	60,190	26,211
	Totals		19.378		\$1,393,291			\$134,931		\$54,782	\$1,528,222	\$700,458

Pierce.....	46.50	3.258	\$17,778 84	\$97,907	\$8,264 84	\$36,927	\$1,721 28	\$5,608	\$800 40	\$2,608	\$98,515	\$29,535
Main Line												
Sldings												
Skagit.....	30.30	27.017	\$88,869 22	\$2,400,980	\$29,888 50	\$725,000	\$6,006 38	\$232,519	\$2,509 13	\$70,221	\$2,683,499	\$736,317
Main Line		7.015	\$17,778 84	135,348	5,397 70	40,875	1,721 28	13,106	519 88	3,969	148,466	44,884
Sldings												
Branch Lines-												
Main Line		33.653	\$26,660 76	1,430,480	8,061 65	431,900	2,561 91	136,327	779 74	41,983	1,568,957	473,825
Sldings		19.065	4,443 46	84,715	1,841 92	25,584	430 32	8,204	129 96	2,478	92,919	28,082
Totals		107.850		\$4,061,473		\$1,223,345		\$392,368		\$118,408	\$4,443,831	\$1,342,088
Snohomish.....	40.40	80.736	\$88,809 22	\$7,974,708	\$35,903 16	\$3,221,800	\$8,606 38	\$772,302	\$3,478 96	\$612,010	\$8,747,070	\$8,538,816
Main Line		17.064	\$26,660 76	1,435,739	10,770 93	184,119	2,561 91	44,135	1,043 00	17,831	449,874	201,960
Sldings		04.492	\$17,778 84	1,146,271	7,180 68	403,068	1,721 28	111,009	686 40	44,848	1,267,280	507,941
Totals		171.322		\$9,576,778		\$3,889,016		\$277,446		\$374,639	\$10,504,224	\$4,248,707
Spokane.....	39.30	58.412	\$88,869 22	\$5,191,020	\$24,925 00	\$2,040,074	\$8,606 38	\$502,716	\$3,382 31	\$197,567	\$5,063,745	\$2,237,641
Main Line		3.518	\$26,660 76	93,792	10,477 68	36,860	2,561 91	9,068	1,014 69	3,570	102,875	40,430
Sldings		58.943	\$17,778 84	1,047,643	6,985 12	411,724	1,721 28	101,457	676 46	39,878	1,149,100	451,597
Spokane Falls &												
Northern Branch-		16.752	\$1,104 22	521,066	12,223 96	204,770	3,012 24	50,461	1,188 61	19,831	571,519	224,607
Main Line		2.850	\$8,886 92	25,328	3,492 59	9,934	800 64	2,453	338 28	964	27,781	10,918
Sldings												
Totals		140.475		\$6,878,880		\$2,703,388		\$606,170		\$281,605	\$7,545,020	\$2,805,193
Stevens.....	32.30	100.195	\$31,104 22	\$3,306,425	\$10,108 87	\$1,103,838	\$3,012 24	\$329,922	\$978 96	\$106,900	\$3,725,247	\$1,210,738
Main Line		20.512	\$8,886 92	162,268	2,688 26	56,244	800 64	17,068	279 71	5,787	199,941	64,961
Sldings		12.138	\$26,660 76	324,008	8,664 75	105,303	2,561 91	31,878	839 09	10,197	355,386	115,500
Other Branch Lines-		.377	4,443 46	1,675	1,444 12	541	430 32	162	139 85	53	1,687	597
Main Line												
Sldings		142.237		\$3,904,886		\$1,208,929		\$378,115		\$122,687	\$4,282,511	\$1,391,816
Totals												
Whatcom.....	35.40	31.889	\$88,869 22	\$2,850,507	\$31,439 70	\$1,001,645	\$8,606 38	\$274,018	\$3,046 66	\$97,003	\$3,108,525	\$1,088,648
Main Line		12.532	\$17,778 84	222,742	6,291 94	78,831	1,721 28	21,971	609 38	7,036	244,313	86,487
Sldings												
Totals		44.371		\$3,032,249		\$1,080,480		\$206,989		\$104,639	\$3,347,838	\$1,185,135

Schedule "C"—Table I.—Steam Railroads—Continued.

GREAT NORTHERN RAILWAY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Totals....	Main Line—												
	Main Track		471.884	\$8,899.22	\$41,085,993		\$16,732,893	\$8,000.38	\$4,061,218		\$1,690,583	\$45,927,176	\$18,354,456
	2nd Main Track		35.189	26,660.76	988,165		390,751	2,581.91	90,856		38,714	1,029,020	438,465
	Sidings		284.881	17,773.84	5,063,429		2,070,962	1,721.28	490,360		200,561	5,536,789	2,271,523
	Spokane Falls & Northern Branch—												
	Main Track		125.947	31,104.22	3,917,483		1,306,614	3,012.24	379,883		126,731	4,296,866	1,435,345
	Sidings		23.362	8,896.92	207,616		66,198	860.64	20,106		6,701	227,722	75,869
	Other Branch Lines—												
	Main Track		379.989	26,660.76	10,139,463		3,981,410	2,581.91	980,868		385,570	11,110,431	4,366,890
	Sidings		63.578	4,443.46	282,506		106,402	430.32	27,359		10,499	309,865	118,901
	Totals		1,384.790		\$62,471,625		\$24,672,230		\$6,060,244		\$2,389,339	\$68,624,869	\$27,061,509
EQUIPMENT (ONLY) OVER N. P. RY. Tracks between Seattle and Vancouver, Wn.													
Clarke.....	Main Line	36.00											
	Main Track		17.300					\$8,000.38	\$148,900		\$53,000	\$148,900	\$53,000
	2nd Main Track		17.269					2,581.91	44,664		16,079	44,664	16,079
	Sidings		6.989					1,721.28	12,080		4,381	12,080	4,381
	Totals		41.558						\$205,584		\$74,010	\$205,584	\$74,010
Cowlitz.....	Main Line	30.00											
	Main Track		40.178					\$8,000.38	\$845,787		\$108,736	\$845,787	\$108,736
	2nd Main Track		40.178					2,581.91	108,736		31,121	108,736	31,121
	Sidings		7.434					1,721.28	12,766		3,869	12,766	3,869
	Totals		87.790						\$462,319		\$138,696	\$462,319	\$138,696
King.....	Main Line	46.00											
	Main Track		24.094					\$8,000.38	\$207,302		\$26,386	\$207,302	\$26,386
	2nd Main Track		24.104					2,581.91	62,234		23,628	62,234	23,628
	Sidings		3.693					1,721.28	6,306		2,900	6,306	2,900
	Totals		51.891						\$275,901		\$52,914	\$275,901	\$52,914

[illegible]

* Includes 2.44 miles of 3rd main track.

Includes 1.25 miles of 3rd main track.

Schedule "C"—Table I—Steam Railroads—Continued.
MARYSVILLE & ARLINGTON RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value
Snobomish...	Main Line	40.40	\$8,000 00	\$120,000	\$3,232 00	\$48,480	\$324 80	\$0,372	\$22 42	\$52,296
	Main Track		1,600 00	1,635	646 40	661	124 86	128	50 48	713
	Sidings			\$121,635		\$19,141		\$0,500		\$52,979
	Totals									

MILWAUKEE TERMINAL RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value
Jefferson... King... Kitsap... Pierce... Whatcom...	1 landing and spur...	44.00		\$17,020		\$7,480		\$24,000		\$41,020
	2 landings and spurs...	46.00		24,500		11,270		48,000		72,500
	2 landings and spurs...	44.00		24,680		10,850		48,000		72,680
	4 landings and spurs...	46.50		188,800		64,551		96,000		284,800
	1 landing and spur...	35.40		13,800		4,842		24,000		37,800
	Totals			\$218,800		\$90,111		\$240,000		\$458,900

NORTHERN PACIFIC RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio actual value (Pct.)	Mileage	REAL PROPERTY Right-of-way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Adams.....	Main Line.....	42.00	57.309	\$61,733 71	\$4,700,424	\$4,323 16	\$1,974,176	\$15,472 15	\$689,788	\$4,493 30	\$373,771	\$5,560,212	\$2,347,889
	Main Track.....		19.524	16,346 74	319,154	6,895 63	134,045	3,094 43	60,416	1,259 96	25,375	379,670	159,430
	Sidings.....												
	Branch Lines—		19.680	24,520 11	482,556	10,298 45	202,073	4,641 64	91,347	1,949 49	38,369	573,903	241,089
	Main Track.....		1.801	4,066 68	7,360	1,716 41	3,091	773 60	1,388	321 91	565	8,763	3,676
	Totals.....		96.514		\$5,509,404		\$1,313,967		\$1,042,944		\$488,037	\$3,652,438	\$2,752,024
Benton.....	Main Line.....	43.00	43.738	\$61,733 71	\$3,574,869	\$35,145 50	\$1,587,194	\$15,473 15	\$976,721	\$4,493 30	\$230,960	\$4,251,560	\$1,828,164
	Main Track.....		15.794	16,346 74	268,180	7,029 06	111,017	3,094 43	48,873	1,330 40	21,015	307,038	132,082
	Sidings.....												
	Branch Lines—		10.609	24,520 11	260,134	10,543 65	111,858	4,641 64	49,243	1,995 98	21,174	300,377	138,082
	Main Track.....		1.453	4,066 68	5,960	1,757 27	2,569	773 60	1,126	332 65	484	7,076	3,043
	Totals.....		71.597		\$4,099,133		\$1,793,623		\$775,933		\$283,663	\$4,875,066	\$2,006,291
Clarke.....	Main Line.....	36.00	17.296	\$61,733 71	\$1,413,880	\$29,424 14	\$608,979	\$15,472 15	\$287,687	\$4,493 30	\$98,349	\$1,681,467	\$905,328
	Main Track.....		17.259	24,520 11	424,173	8,267 24	182,708	4,641 64	80,236	1,671 00	23,907	504,449	181,609
	Sidings.....		8.175	16,346 74	133,685	5,684 58	46,106	3,094 43	25,237	1,119 90	9,107	138,982	57,215
	Branch Lines—		27.249	24,520 11	698,148	8,827 24	240,533	4,641 64	126,460	1,670 99	45,583	794,628	288,066
	Main Track.....		3.896	4,066 68	15,799	1,471 20	5,688	773 60	2,991	278 50	1,077	18,790	6,765
	Totals.....		73.867		\$2,655,596		\$956,010		\$502,701		\$180,973	\$3,158,296	\$1,136,983
Columbia...	Dayton Branch.....	38.00	8.184	\$29,006 80	\$234,118	\$10,870 58	\$86,905	\$5,415 26	\$44,319	\$2,067 80	\$16,841	\$278,437	\$105,806
	Main Track.....		2.456	8,173 38	20,074	3,105 88	7,623	1,547 22	3,800	597 54	1,444	23,874	9,072
	Sidings.....												
	Branch Lines—												
	Main Track.....												
	Totals.....		10.640		\$254,192		\$94,528		\$48,119		\$18,285	\$302,311	\$114,878
Cowlitz....	Main Line.....	30.00	40.177	\$61,733 71	\$3,288,815	\$24,520 11	\$986,144	\$15,472 15	\$921,025	\$4,491 45	\$186,489	\$3,005,440	\$1,171,632
	Main Track.....		40.174	24,520 11	985,071	7,356 08	296,521	4,641 64	136,473	1,392 49	55,942	1,171,544	351,463
	Sidings.....		8.302	16,346 74	135,711	4,904 02	40,713	3,094 43	25,680	928 33	7,707	161,401	48,420
	Branch Lines—												
	Main Track.....												
	Totals.....		88.653		\$4,404,597		\$1,323,378		\$883,738		\$250,137	\$5,288,335	\$1,571,515

Schedule "C"—Table I.—Steam Railroads—Continued.
NORTHERN PACIFIC RAILWAY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Franklin.....	Main Line.....	43.50	42.070	\$81,733 71	\$3,487,577	\$35,554 16	\$1,517,066	\$15,472 12	\$660,197	\$2,730 39	\$297,186	\$4,147,774	\$1,804,282
	Main Track.....		42.638	10,346 74	690,992	7,110 82	303,197	3,094 43	131,940	1,340 06	37,394	828,932	360,585
	Walla Walla Branch—												
	Main Track.....	1.625	25,000 80	46,486	12,443 95	20,221	5,415 24	8,800	2,355 64	3,828	55,286	24,049	786
	Sidings.....	1.86	8,173 38	1,520	3,555 42	661	1,547 22	288	673 04	125	1,908	1,908	1,908
	Other Branch Lines—												
	Main Track.....	41.505	24,320 11	1,017,707	10,666 25	442,705	4,641 64	192,651	2,019 11	88,808	1,210,368	626,500	8,438
Grant.....	Sidings.....	3.991	4,086 68	16,310	1,777 71	7,005	773 60	3,067	336 52	1,343	19,307	8,438	8,438
	Totals.....		132.615		\$5,266,592		\$2,290,967		\$696,963		\$433,679	\$3,263,555	\$2,734,646
	Washington Central Branch.....												
	Main Track.....	39.50	19,033	\$29,006 80	\$544,473	\$11,299 69	\$215,067	\$5,415 26	\$108,069	\$2,139 08	\$40,712	\$647,542	\$255,779
	Sidings.....		2.893	8,173 38	23,400	3,228 49	9,245	1,547 22	4,430	611 15	1,750	27,830	10,988
	Other Branch Lines—												
	Main Track.....	66.183	24,520 11	1,692,814	9,685 44	641,011	4,641 64	307,198	1,833 45	121,343	1,680,012	762,354	8,354
Grays Harbor.....	Sidings.....		4.351	4,086 68	17,781	1,614 24	7,024	773 60	3,306	305 57	1,390	21,147	8,354
	Totals.....		92.430		\$2,208,468		\$672,344		\$418,063		\$165,135	\$2,026,531	\$1,067,490
	Grays Harbor B'ch.....												
	Main Track.....	38.00	41,177	\$82,663 49	\$1,346,220	\$12,423 53	\$311,504	\$9,188 87	\$254,889	\$2,351 77	\$98,839	\$1,001,069	\$608,403
	2nd Main Track.....		1.350	16,346 74	22,008	6,211 70	8,336	3,094 43	4,178	1,175 86	1,587	26,246	9,973
	Sidings.....		16.967	8,173 38	163,196	3,105 86	62,013	1,547 22	30,863	587 94	11,739	194,091	73,754
	Other Branch Lines—												
King.....	Main Track.....	57.366	24,520 11	1,412,015	9,317 64	586,566	4,641 64	267,233	1,763 82	101,571	1,679,308	688,137	22,866
	Sidings.....		12.397	4,086 68	50,662	1,552 94	19,252	773 60	9,500	293 97	3,644	60,252	22,866
	Totals.....		132.477		\$2,004,163		\$1,187,758		\$566,793		\$215,390	\$1,560,956	\$1,303,163
	Main Line.....	46.00	111,060	\$61,733 71	\$9,077,240	\$37,567 51	\$4,175,579	\$15,472 15	\$1,718,337	\$7,117 10	\$704,430	\$10,795,688	\$4,930,014
	Main Track.....		37.754	24,520 11	965,782	11,279 25	425,837	4,041 64	175,240	2,133 15	80,610	1,100,072	500,447
	Sidings.....		154.510	10,346 74	2,925,735	7,519 50	1,161,888	3,094 43	479,120	1,423 44	219,986	3,006,855	1,361,774

Buckley Branch—	Main Track	12,237	28,606 80	350,082	13,139 13	101,028	5,415 26	04,266	2,491 02	30,483	416,328	101,511
	Sidings	8,663	8,173 38	70,806	3,736 75	32,571	1,347 22	13,404	711 72	6,166	84,210	38,737
	Other Branch Lines—											
	Main Track	78,546	24,520 11	1,925,837	11,279 25	885,940	4,641 64	364,382	2,135 13	167,707	2,290,538	1,063,647
	Sidings	20,762	4,066 68	84,848	1,879 57	39,030	773 60	16,061	356 86	7,388	100,949	40,418
Totals		423,532		\$14,890,436		\$9,881,823		\$2,882,010		\$1,302,725	\$17,792,406	\$8,184,548
Kittitas	Main Line		38.50									
	Main Track	73,193	\$81,733 71	\$5,882,335	\$81,467 48	\$2,308,199	\$15,472 15	\$1,182,453	\$5,956 78	\$435,996	\$7,114,788	\$2,738,194
	2nd Main Track	6,460	24,520 11	207,440	9,440 26	79,856	4,641 64	39,268	1,787 08	15,118	246,709	94,983
	Sidings	60,866	16,346 74	994,797	6,238 40	382,997	3,094 48	186,515	1,191 36	72,501	1,183,112	455,408
	Branch Lines—											
Lewis	Main Track	7,180	24,520 11	176,064	9,440 26	67,781	4,641 64	33,327	1,787 08	12,381	209,381	80,612
	Sidings	9,335	4,066 68	38,149	1,873 37	14,067	773 60	7,222	297 84	2,780	45,371	17,467
	Totals	130,024		\$7,368,775		\$2,848,629		\$1,400,586		\$389,225	\$85,709,360	\$1,387,754
Lincoln	Main Line		35.30									
	Main Track	28,431	\$81,733 71	\$2,323,771	\$28,862 00	\$820,291	\$15,472 15	\$439,869	\$5,461 67	\$155,281	\$2,762,690	\$875,572
	2nd Main Track	*30,884	24,520 11	756,789	8,655 80	267,146	4,641 64	143,200	1,688 50	50,871	900,049	317,717
	Sidings	28,311	16,346 74	492,798	5,770 40	163,366	3,094 48	87,606	1,092 33	30,925	560,369	194,291
	Gray Harbor Branch—											
Lincoln	Main Track	4,000	32,608 49	130,774	11,540 87	46,163	6,188 87	24,756	2,184 67	8,738	155,509	54,902
	Sidings	2,081	8,173 38	16,600	2,885 27	5,890	1,547 22	3,142	546 17	1,109	19,742	6,869
	South Bend Branch—											
	Main Track	26,183	28,608 80	749,012	10,068 20	284,401	5,415 26	141,768	1,911 59	50,051	880,809	314,432
	Sidings	5,780	8,173 38	47,242	2,865 20	16,672	1,547 22	8,948	546 17	3,167	56,186	19,688
Lincoln	Other Branch Lines—											
	Main Track	7,066	24,520 11	173,750	8,655 80	61,331	4,641 64	32,891	1,688 50	11,610	206,641	72,944
	Sidings	1,109	4,066 68	4,582	1,442 60	1,604	773 60	858	273 08	308	5,390	1,943
	Totals	133,765		\$4,065,268		\$1,646,837		\$698,133		\$811,746	\$5,548,306	\$1,938,583
Lincoln	Main Line		41.30									
	Main Track	16,618	\$81,733 71	\$1,358,251	\$83,755 02	\$580,968	\$15,472 15	\$237,116	\$5,380 00	\$106,189	\$1,615,367	\$607,147
	Sidings	6,304	16,346 74	108,060	6,751 20	42,560	3,094 48	19,507	1,277 99	8,056	122,567	50,616
	Washington Central Branch—											
	Main Track	66,104	28,608 80	1,901,024	11,814 61	780,988	5,415 26	387,970	2,286 50	147,842	2,249,094	928,835
Lincoln	Sidings	9,913	8,173 38	56,508	3,375 61	23,336	1,547 22	10,666	689 00	4,417	67,169	27,733
	Other Branch Lines—											
	Main Track	17,923	24,520 11	439,474	10,126 81	181,503	4,641 64	88,192	1,917 00	34,358	622,666	215,861
	Sidings	1,980	4,066 68	3,923	1,067 80	1,620	773 60	743	319 50	307	4,666	1,927
	Totals	114,822		\$3,832,225		\$1,560,970		\$729,224		\$301,106	\$4,581,449	\$1,892,130

* Includes 2.433 miles of 3rd main track.

Schedule "C"—Table L—Steam Railroads—Continued.

NORTHERN PACIFIC RAILWAY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY			PERSONAL PROPERTY			TOTAL VALUATION	
			Mileage	Rate per mile actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile actual value	Actual value	Equalized value
Mason.....	Branch Lines	38.30								
	Main Track		.825	\$24,320 11	\$20,229	\$0.391 20	\$7,748	\$4,641 64	\$3,829	\$1,466
	Sidings		.000	4,086 68	308	1,565 20	141	773 60	70	27
	Totals.....		.915		\$20,537		\$7,889		\$3,899	\$1,493
Pacific.....	South Bend Branch	39.00								
	Main Track		30.492	\$28,006 80	\$872,278	\$11,156 64	\$340,188	\$5,415 26	\$165,122	\$64,398
	Sidings		8.829	8,173 38	72,168	3,187 62	28,143	1,547 22	13,690	5,328
	Totals.....		39.321		\$944,441		\$368,331		\$178,732	\$69,726
Pierce.....	Main Line	46.50								
	Main Track		42.414	\$81,733 71	\$5,466,654	\$38,008 18	\$1,011,994	\$15,472 15	\$556,236	\$7,194 55
	2nd Main Track		41.535	24,320 11	1,018,448	11,401 86	473,576	4,641 64	192,791	89,047
	Sidings		76.879	16,346 74	1,256,721	7,601 23	594,375	3,094 43	237,807	1,438 91
	Prairie Line Branch—									
	Main Track		22.330	32,023 49	730,046	15,202 47	399,471	6,188 87	138,197	2,877 82
	2nd Main Track		4.811	16,346 74	78,644	7,601 23	36,570	3,094 43	14,867	1,438 91
	Sidings		34.484	8,173 38	281,351	3,800 62	131,061	1,547 22	53,354	719 46
	Buckley Branch—									
	Main Track		21.307	28,006 80	609,235	13,302 16	283,459	5,415 26	115,368	2,518 10
	2nd Main Track		1.328	16,346 74	24,078	7,601 23	11,616	3,094 43	4,728	1,438 91
	Sidings		3.917	8,173 38	46,007	3,800 62	22,602	1,547 22	9,201	719 46
	Olympia Branch—									
	Main Track		11.460	28,006 80	327,534	13,302 16	182,448	5,415 26	62,069	2,518 10
	2nd Main Track		8.562	8,173 38	70,236	3,800 62	32,656	1,547 22	13,294	719 46
	Sidings		36.002	24,320 11	885,506	11,401 86	410,831	4,641 64	167,248	2,158 90
	Other Branch Lines—		7.842	4,086 68	32,046	1,900 31	14,902	773 60	6,007	2,821
	Sidings									
	Totals.....		315.161		\$6,929,086		\$4,106,024		\$1,671,342	\$777,175
Shaght.....	Main Line	30.20								
	Main Track		29.825	\$61,733 71	\$2,380,941	\$24,068 58	\$723,840	\$15,472 15	\$453,721	\$4,672 50
	Sidings		14.097	16,346 74	230,440	4,980 72	69,568	3,094 43	43,022	18,174
	Totals.....		43.422		\$2,617,381		\$793,408		\$497,843	\$195,196

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Schedule "C"—Table I.—Steam Railroads—Continued.
NORTHERN PACIFIC RAILWAY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY			PERSONAL PROPERTY			TOTAL VALUATION	
			Rate per mile, actual value	Actual value	Equalized rate per mile	Rate per mile, actual value	Actual value	Equalized value	Real and Personal Property	Equalized value
Walla Walla.	Walla Walla Branch	41.00								
	Main Track	11.605	\$28,606 80	\$93,982	\$11,738 79	\$5,415 26	\$62,844	\$25,706	\$394,826	\$161,879
	Sidings	2.803	8,173 38	22,910	3,351 09	1,547 22	4,337	634 36	27,247	11,171
	Dayton Branch—									
	Main Track	78.012	28,606 80	2,231,674	11,738 79	5,415 26	422,435	173,297	2,654,193	1,088,193
	Sidings	13.632	8,173 38	111,083	3,351 09	1,547 22	21,123	634 36	132,706	54,409
Whatcom.	Other Branch Lines—									
	Main Track	30.530	24,520 11	\$85,720	10,053 25	4,641 64	169,559	1,903 07	1,065,279	436,764
	Sidings	3.046	4,086 68	12,448	1,675 54	773 60	2,356	317 18	14,894	6,670
	Totals	145.648		\$3,606,317			\$32,674		\$4,288,691	\$1,758,486
	Main Line	35.40								
	Main Track	28.949	\$81,733 71	\$2,364,109	\$28,933 73	\$15,473 15	\$447,903	\$5,477 14	\$2,814,012	\$966,100
Whitman.	Sidings	7.982	16,346 74	130,480	5,786 75	3,094 43	24,700	1,065 43	155,180	54,964
	Bellingham Branch—									
	Main Track	22.746	28,606 80	650,690	10,126 81	5,415 26	123,175	43,604	773,965	273,948
	Sidings	7.111	8,173 38	58,121	2,863 38	1,547 22	11,002	547 72	69,123	24,470
	Totals	66.788		\$3,205,400			\$906,780		\$3,812,180	\$1,349,512
	Pulouise & Lewiston Branch	38.70								
Yakima.	Main Track	58.991	\$32,603 49	\$1,928,621	\$12,652 37	\$9,188 87	\$365,088	\$2,305 00	\$2,263,700	\$857,065
	Sidings	10.281	8,173 38	81,631	3,463 10	1,547 22	15,907	508 77	90,938	38,676
	Other Branch Lines—									
	Main Track	34.367	24,520 11	\$41,211	9,489 28	4,641 64	159,241	1,799 31	1,000,432	387,175
	Sidings	3.956	4,086 68	16,167	1,681 55	773 60	3,060	299 88	19,227	7,441
	Totals	107.535		\$2,870,630			\$543,296		\$3,413,926	\$1,320,967
Yakima.	Main Line	40.30								
	Main Track	55.610	\$81,733 71	\$4,545,211	\$37,842 71	\$15,473 15	\$800,406	\$7,163 00	\$5,405,617	\$2,592,861
	Sidings	44.495	16,346 74	727,348	7,508 54	3,094 43	137,087	1,432 72	805,065	400,511
	Branch Lines—									
	Main Track	91.322	24,520 11	2,230,225	11,352 82	4,641 64	423,884	149 08	2,603,109	1,233,020
	Sidings	30.867	4,086 68	85,277	1,892 13	773 60	16,143	338 18	101,426	46,967
	Totals	212.294		\$7,597,691			\$1,408,130		\$9,005,821	\$4,128,359

Totals....	Main Line—	703.488	\$21,733 71	\$67,436,694	.....	\$22,456,154	\$15,472 15	\$10,864,472	.....	\$4,440,061	\$68,388,156	\$27,886,205
	Main Tract.....	222,958	24,890 11	5,466,954	.....	2,150,648	4,641 64	1,084,891	.....	407,116	6,501,845	2,567,764
	Sidings.....	571.182	16,846 74	9,896,994	.....	3,903,216	3,094 48	1,707,498	.....	750,236	11,104,447	4,713,451
	Prairie Line Branch—											
	Main Tract.....	39.494	32,603 49	1,297,197	.....	663,881	6,188 87	244,423	.....	106,752	1,585,620	670,683
	Sidings.....	4.811	10,346 74	78,644	.....	36,570	3,094 48	14,887	.....	6,923	98,581	43,468
	Grays Harbor Bel—	40.349	8,173 88	329,788	.....	150,236	1,547 22	62,429	.....	28,440	392,217	178,676
	Main Tract.....	55.301	32,603 49	1,807,983	.....	690,123	6,188 87	342,251	.....	130,040	2,150,234	880,763
	Sidings.....	1.350	16,346 74	22,008	.....	8,386	3,094 48	4,178	.....	1,597	26,246	9,973
	Palouse & Lewiston	25.062	8,173 88	204,841	.....	77,882	1,547 22	38,776	.....	14,744	243,617	92,630
	Branch—											
	Main Tract.....	54.085	32,603 49	2,747,397	.....	1,008,155	6,188 87	520,082	.....	202,202	3,267,470	1,270,357
	Sidings.....	14.134	8,173 88	115,823	.....	44,896	1,547 22	21,968	.....	8,490	137,391	53,395
	Everett Branch—											
	Main Tract.....	11.873	28,606 80	825,845	.....	131,439	5,415 26	61,566	.....	24,882	396,986	156,321
	Sidings.....	13.714	8,173 88	112,000	.....	45,284	1,547 22	21,219	.....	8,573	183,309	53,367
	Buckley Branch—											
	Main Tract.....	32.544	28,606 80	960,577	.....	444,457	5,415 26	181,649	.....	84,136	1,141,236	528,593
	Sidings.....	1.523	16,346 74	24,978	.....	11,615	3,094 48	4,728	.....	2,199	29,708	13,814
	Olympia Branch—	14.610	8,173 88	119,413	.....	55,173	1,547 22	22,606	.....	10,445	142,018	66,018
	Main Tract.....	39.912	28,606 80	1,141,755	.....	478,011	5,415 26	216,124	.....	90,497	1,387,889	568,468
	Sidings.....	20.175	8,173 88	164,868	.....	70,824	1,547 22	31,215	.....	13,351	196,113	88,575
	South Bend Branch—											
	Main Tract.....	56.675	28,606 80	1,621,230	.....	604,589	5,415 26	306,910	.....	114,449	1,928,200	719,088
	Sidings.....	14.609	8,173 88	119,406	.....	44,819	1,547 22	22,608	.....	8,485	142,008	53,304
	Washington Central											
	Branch—											
	Main Tract.....	108.812	28,606 80	3,112,763	.....	1,292,225	5,415 26	590,245	.....	238,689	3,702,006	1,501,164
	Sidings.....	12.605	8,173 88	106,025	.....	41,066	1,547 22	19,508	.....	7,887	122,528	49,553
	Wallula Branch—											
	Main Tract.....	13.290	28,606 80	373,498	.....	156,384	5,415 26	71,644	.....	29,594	450,112	185,928
	Sidings.....	2.989	8,173 88	24,430	.....	10,064	1,547 22	4,625	.....	1,003	29,065	11,967
	Dayton Branch—											
	Main Tract.....	86.106	28,606 80	2,465,792	.....	1,003,951	5,415 26	496,774	.....	190,048	2,982,566	1,138,909
	Sidings.....	16.108	8,173 88	181,667	.....	53,377	1,547 22	24,923	.....	10,104	181,580	68,481
	Bellingham Branch—											
	Main Tract.....	22.746	28,606 80	660,600	.....	230,344	5,415 26	122,175	.....	48,604	773,965	273,948
	Sidings.....	7.111	8,173 88	58,121	.....	20,575	1,547 22	11,002	.....	3,865	69,123	24,470
	All Other Branch											
	Lines—											
	Main Tract.....	608.788	24,590 11	14,927,549	.....	6,274,883	4,641 64	2,885,774	.....	1,187,846	17,758,323	7,462,829
	Sidings.....	106.801	4,096 68	496,461	.....	186,639	773 60	82,621	.....	36,140	519,082	250,179
	Totals.....	2,963,690		\$105,777,760	.....	\$48,384,296		\$20,028,671	.....	\$6,208,156	\$136,801,437	\$51,587,422.

Schedule "C"—Table I.—Steam Railroads—Continued.

NORTHERN PACIFIC RAILWAY—Concluded.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd. ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property		
				Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value	
EQUIPMENT (ONLY) OVER FOREIGN LINES.														
Franklin....	Branch Lines	43.50												
	(Over S. P. & S.)		24,838					\$4,641 64	\$115,299	\$2,019 11	\$30,151	\$115,299	\$30,151	
	Main Track		4,402					773 60	3,406	336 52	1,481	3,406	1,481	
	Totals		29,240						\$118,605		\$31,632	\$118,605	\$31,632	
Grays Harbor	Branch Line	38.00												
	(Over O.-W. R. R. & N. Co.)													
	Main Track		1,630					\$4,641 64	\$7,566	\$1,768 92	\$2,875	\$7,566	\$2,875	
	2nd Main Track		1,650					1,547 22	2,558	587 94	970	2,558	970	
	Sidings		4,160					773 60	3,218	256 97	1,223	3,218	1,223	
	Totals		7,440						\$13,337		\$5,068	\$13,337	\$5,068	
Lewis.....	Branch Line	35.30												
	(Over O.-W. R. R. & N. Co.)													
	Main Track		1,420					\$4,641 64	\$6,591	\$1,688 50	\$2,327	\$6,591	\$2,327	
Snohomish..	Main Line	40.40												
	(Over G. N. Ry.)		11,372					\$15,472 15	\$179,044	\$6,250 75	\$72,334	\$179,044	\$72,334	
	Main Track		.755					3,094 43	2,336	1,250 15	944	2,336	944	
	Sidings													
	Totals		12,327						\$181,380		\$73,278	\$181,380	\$73,278	
Whitman....	Branch Lines	33.70												
	(Over O.-W. R. R. & N. Co.)													
	Main Track		70,560					\$4,641 64	\$227,236	\$1,700 31	\$132,641	\$227,236	\$132,641	
	Sidings		9,080					773 60	7,024	256 85	2,718	7,024	2,718	
	Totals		79,580						\$234,260		\$135,350	\$234,260	\$135,350	

[illegible]

OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized per mile	Equalized value	Actual value	Equalized value
Adams.....	Main Line.....	42.00											
	Main Track		41.150	\$88,561 58	\$8,438,557	\$35,005 84	\$1,444,104	\$4,753 92	\$105,624	\$1,906 65	\$2,162	\$3,684,181	\$1,626,356
	Sidings.....		8.460	16,712 32	141,219	7,019 17	59,812	860 78	8,064	369 33	3,374	149,253	62,686
	Branch Lines— Main Track		9.190	25,068 46	280,378	10,628 75	96,759	1,428 17	13,107	508 99	4,505	243,486	102,284
	Sidings.....		.720	4,178 08	3,008	1,754 79	1,263	287 70	171	59 83	72	3,179	1,335
	Totals.....		56.510		\$8,813,163		\$1,601,928		\$216,906		\$91,113	\$4,089,099	\$7,692,641
Benton.....	Yakima Branch												
	Main Track	43.00	48.660	\$53,424 61	\$1,628,441	\$14,372 58	\$690,370	\$1,901 56	\$62,539	\$817 67	\$69,788	\$1,718,971	\$730,158
	Sidings.....		8.300	8,356 15	70,108	3,586 14	30,146	475 20	3,988	204 42	1,715	74,006	31,861
	Totals.....		57.060		\$1,698,549		\$720,516		\$66,518		\$41,503	\$1,793,067	\$771,019
Clarke.....	Main Line	36.00											
	Sidings.....		.520	\$16,712 32	\$6,691	\$5,016 44	\$3,120	\$660 78	\$494	\$842 28	\$178	\$9,185	\$3,307

Schedule "C"—Table I.—Steam Railroads—Continued.
OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Rate per mile, actual value	Actual value	Equal- ized per mile value	Rate per mile, actual value	Actual value	Equal- ized per mile value	Actual value	Equalized value
Columbia...	Main Line	38.00								
	Main Track	8.630	\$38,561 53	\$721,136	\$31,753 38	\$4,753 92	\$41,036	\$1,806 49	\$702,162	\$239,692
	Sidings	2.620	16,712 32	43,786	6,330 68	960 78	2,491	361 30	46,277	17,565
	Fendleton-Grange City Branch									
	Main Track	24.330	54,315 00	1,321,484	30,689 70	3,000 05	75,181	1,174 22	1,396,665	530,733
	Sidings	4.150	16,712 32	69,356	6,330 68	960 78	3,046	361 30	73,302	27,864
	Dayton Branch									
	Main Track	19.670	33,424 61	637,402	12,701 35	1,901 56	37,404	722 59	694,806	264,049
	Sidings	4.160	8,356 15	34,761	3,175 34	475 36	1,978	180 65	36,739	13,961
	Pomeroy Branch									
Franklin...	Main Track	13.950	33,424 61	466,273	12,701 35	1,901 56	26,527	722 59	492,800	187,264
	Sidings	.740	8,356 15	6,183	3,175 34	475 36	322	180 65	6,505	2,484
	Totals	78.250		\$3,320,441			\$188,906		\$3,509,346	\$1,333,532
	Main Line	43.50								
	Main Track	7.160	\$33,561 53	\$508,300	\$36,349 27	\$4,753 92	\$54,038	\$2,097 94	\$562,338	\$275,087
	Sidings	.770	16,712 32	12,869	7,369 86	960 78	732	413 56	13,601	5,916
	Branch Lines									
	Main Track	23.620	25,068 46	717,159	10,904 78	1,426 17	40,817	620 38	758,270	329,860
	Sidings	1.700	4,179 06	7,103	1,817 46	237 70	404	103 40	7,507	3,266
	Totals	38.250		\$1,335,731			\$75,991		\$1,411,722	\$514,069
Garfield.....	Pomeroy Branch	33.00								
	Main Track	16.050	\$33,424 61	\$530,466	\$11,080 12	\$1,901 56	\$30,890	\$227 51	\$561,356	\$187,106
	Sidings	2.220	8,356 15	13,551	2,757 53	475 36	1,056	156 88	19,606	6,470
	Totals	18.270		\$545,016			\$31,946		\$580,962	\$193,576
	Main Line									
	Main Track	41.480	\$33,424 61	\$1,386,456	\$12,701 35	\$1,901 56	\$78,577	\$722 59	\$1,465,033	\$550,825
	2nd Main Track	1.050	16,712 32	27,575	6,350 68	960 78	1,569	361 30	29,144	11,075
	Sidings	15.600	8,356 15	130,366	3,175 34	475 36	7,416	180 65	137,782	52,838
	Other Branch Lines									
	Main Track	13.650	25,068 46	342,185	9,020 21	1,426 17	19,467	541 95	361,652	137,498
Grays Harbor	Sidings	1.820	4,179 06	7,004	1,567 67	237 70	483	90 33	8,087	3,064
	Totals	74.200		\$1,894,173			\$107,762		\$2,001,935	\$760,765

[illegible]

Schedule "C"—Table 1.—Steam Railroads—Continued.
OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property			
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value	
Thurston...	Main Line	40.00	.850	\$16,712 32	\$5,849	\$6,684 98	\$2,340	\$650 78	\$838	\$880 31	\$133	\$6,182	\$2,473	
	Sidings													
	Grays Harbor B'ch—													
	Main Track		7.810	33,424 61	244,334	13,309 84	97,734	1,901 56	13,900	760 62	5,360	258,234	108,294	
	Sidings		1.730	8,356 15	14,456	3,342 46	5,782	475 39	822	190 16	329	15,278	6,111	
	Other Branch Lines—													
	Main Track		11.490	25,068 46	288,087	10,027 38	115,215	1,426 17	16,387	570 47	6,555	301,424	121,770	
	Sidings		5.880	4,178 05	21,368	1,671 23	9,743	237 70	1,386	960 06	554	25,744	10,297	
	Totals		26.710		\$577,064		\$230,514		\$32,828		\$13,131	\$609,362	\$243,945	
	Walla Walla.	Main Line	41.00	67.640	\$83,361 33	\$5,632,102	\$84,260 23	\$2,317,392	\$4,738 92	\$321,555	\$1,949 10	\$131,387	\$5,973,657	\$2,449,199
		Main Track		9.400	16,712 32	157,096	6,862 06	64,409	950 78	8,967	389 82	3,064	166,063	68,073
		Colfax Branch—												
Main Track			8.810	62,671 13	569,138	25,695 17	298,374	3,565 44	31,412	1,451 83	12,879	588,545	239,253	
Sidings			1.290	16,712 32	21,566	6,862 06	8,869	960 79	1,227	389 82	506	22,786	9,342	
Pendleton-Grange														
City Branch—														
Main Track			32.320	54,315 00	1,755,461	22,269 15	719,740	3,080 05	99,870	1,266 92	40,947	1,855,331	760,687	
Sidings			11.000	16,712 32	198,886	6,862 06	75,373	950 78	10,459	389 82	4,366	194,236	79,661	
Dayton Branch—														
Main Track			5.890	33,424 61	180,199	13,704 09	73,865	1,901 56	10,249	779 64	4,292	190,408	78,097	
Whitman....	Sidings		.600	8,356 15	5,014	3,436 02	2,056	475 39	285	194 91	117	5,239	2,173	
	Yakima Branch—													
	Main Track		7.680	33,424 61	256,701	13,704 09	105,247	1,901 56	14,604	779 64	5,988	271,305	111,235	
	Sidings		1.770	8,356 15	14,791	3,436 02	6,064	475 39	841	194 91	345	15,632	6,409	
	Other Branch Lines—													
	Main Track		30.280	25,068 46	775,387	10,278 07	317,501	1,426 17	44,111	584 73	18,066	819,478	335,987	
	Sidings		1.460	4,178 05	6,100	1,713 01	2,501	237 70	347	97 46	142	6,447	2,643	
	Totals		179.262		\$9,560,319		\$3,919,731		\$543,397		\$232,008	\$10,104,216	\$4,142,729	
	Main Line	38.70	7.180	\$88,561 53	\$599,972	\$62,336 31	\$232,189	\$4,738 92	\$34,138	\$1,989 71	\$13,210	\$634,105	\$245,399	
	Main Track		.260	16,712 37	0,860	6,407 67	3,316	960 78	261	397 95	217	10,421	4,063	

Schedule "C"—Table I.—Steam Railroads—Continued.
OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY—Continued.

COUNTIES	CLASSIFICATION OF TRACK	As'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Totals... (Concluded)	Grays Harbor B'ch—												
	Main Track.....		54.430	\$83,424 61	\$1,810,302	.....	\$691,132		\$108,502	.....	\$89,319	\$1,922,804	\$730,451
	2nd Main Track.....		1.650	16,712 32	27,575	.....	10,479	.....	1,590	.....	596	29,144	11,075
	Sidings.....		19.380	8,356 15	161,942	.....	61,364	.....	9,213	.....	3,491	171,155	64,355
	Other Branch Lines—												
Totals.....	Main Track.....		174.880	25,068 46	4,332,719	.....	1,763,681	.....	249,337	.....	100,339	4,682,066	1,864,020
	Sidings.....		23.520	4,178 06	98,298	.....	39,841	.....	5,591	.....	2,237	103,859	41,578
	Totals.....		1,125.360	.....	\$47,014,580	.....	\$18,920,501	.....	\$2,674,714	.....	\$1,076,408	\$49,689,274	\$19,936,500
EQUIPMENT (ONLY) OVER FOREIGN LINES.													
Clarke.....	Main Line.....	36.00											
	(Over S. P. & S.)												
	Main Track.....		.000						\$4,758 92		\$154	\$428	\$154
	2nd Main Track.....		.000						1,436 17		46	125	46
	(Over N. P. Ry.)												
Totals.....	Main Track.....		17.300						82,243		29,608	82,243	29,608
	2nd Main Track.....		17.300						1,436 17		8,862	24,673	8,862
	Sidings.....		7.080						6,664		2,406	6,664	2,406
	Totals.....		41.810						\$114,156		\$41,006	\$114,156	\$41,006
Columbia....	Branch Line.....	36.00											
	(Over N. P. Ry.)												
	Sidings.....		.170						\$40		\$15	\$40	\$15
	Totals.....												
Cowlitz....	Main Line.....	30.00											
	(Over N. P. Ry.)												
	Main Track.....		40.180						\$4,753 92		\$67,304	\$101,012	\$67,304
	2nd Main Track.....		40.180						1,436 17		17,191	57,308	17,191
	Sidings.....		7.300						960 76		2,082	6,941	2,082
Totals.....			87.660						\$255,250		\$76,577	\$255,250	\$76,577

Schedule "C"—Table I.—Steam Railroads—Continued.
OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY—Concluded.

COUNTIES	CLASSIFICATION OF TRACK	As'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value
Thurston...	Main Line.....	40.00											
	(Over N. P. Ry.)												
	Main Track.....		25.680					\$4,753.92	\$122,081	\$1,901.57	\$48,582	\$122,081	\$48,582
	2nd Main Track.....		25.190					1,426.17	35,925	14,370	14,370	35,925	14,370
Walla Walla.	Sidings.....		7.710					950.78	7,390	380.31	2,982	7,390	2,982
	Totals.....		58.580						\$165,336		\$50,134	\$165,336	\$50,134
Yakima.....	Branch Lines (Over N. P. Ry.)	41.00	1.080										
	Sidings.....							\$237.70	\$237	\$97.46	\$106	\$237	\$106
	Main Line (Over N. P. Ry.)	40.30	1.550										
	Sidings.....							\$950.78	\$1,474	\$440.23	\$982	\$1,474	\$982
Totals...	Main Line—		106.610					\$4,753.92	\$792,051		\$804,087	\$792,051	\$804,087
	Main Track.....		141.880					1,426.17	202,359		74,602	202,359	74,602
	2nd Main Track.....		73.240					950.78	66,635		27,021	66,635	27,021
	Sidings.....												
Totals...	Branch Lines—		10.340					1,426.17	14,747		6,183	14,747	6,183
	Main Track.....		1.850					475.89	642		244	642	244
	2nd Main Track.....		24.370					237.70	5,792		2,347	5,792	2,347
	Sidings.....												
Track and Equipment.	Totals.....		417.800						\$1,085,226		\$414,484	\$1,085,226	\$414,484
	Equipment (only) over foreign lines		1,125.360		\$47,014,500		\$18,920,501		\$2,674,714		\$1,078,408	\$49,689,274	\$19,938,909
			417.800						1,085,226		414,484	1,085,226	414,484
	Totals.....		1,543.160		\$47,014,500		\$18,920,501		\$3,759,940		\$1,492,892	\$50,774,500	\$20,411,398

OREGON TRUNK RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized actual value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized actual value
Klickitat.....	Main Line	40.00	\$42,798 59	\$31,243	\$17,119 43	\$12,497	\$1,530 05	\$1,117	\$32,360	\$12,944
	Main Track	.780	8,559 72	89,877	3,423 98	35,951	806 01	3,213	98,000	37,236
	Sidings	10.500								
	Totals.....	11.230		\$121,120		\$49,446		\$4,330	\$125,430	\$60,180

PACIFIC COAST RAILROAD.

COUNTIES	CLASSIFICATION OF TRACK	As'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property				
			Mileage	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Actual value	Equalized value		
King.....	Main line.....	46.00													
	Main Track.....		22,430	\$74,671.24	\$1,674,978.82	248.92	\$770,444	\$5,996.78	\$134,506	\$2,758.62	\$81,874	\$1,809,396	\$632,318		
	2nd Main Track.....		10,328	22,407.40	231,362	10,804.64	106,426	1,799.08	18,590	827.55	8,547	249,942	114,973		
	Sidings.....		17,699	14,984.27	264,362	6,889.76	121,688	1,199.36	21,227	551.71	9,765	285,546	131,858		
	Branch Lines.....														
	Main Track.....		30,175	33,602.10	3,013,943	15,456.97	466,414	2,698.55	81,429	1,241.33	37,437	1,066,372	508,371		
	Sidings.....		7,407	7,467.13	55,309	3,434.88	25,442	690.68	4,442	275.85	2,043	59,751	27,485		
	Totals.....		88,089		\$8,289,814		\$1,490,314		\$290,186		\$119,688	\$3,500,000	\$1,610,000		

Schedule "C"—Table I.—Steam Railroads—Continued.

PENINSULAR RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value
Mason.....	Main Line	38.30	15.623	\$10,000 00	\$156,230	\$3,830 00	\$59,836	\$6,619 66	\$2,585 33	\$39,610	\$259,649	\$99,446	
	Main Track		11.240	2,000 00	22,480	766 00	8,610	1,323 42	507 06	5,669	37,361	14,309	
	Sidings												
	Totals.....		26.863		\$178,710		\$68,446				\$297,010	\$113,755	

PUGET SOUND & WILLAPA HARBOR RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property			
				Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value	Equalized value		
Lewis.....	Main Line	35.30													
	Main Track		31.971	\$549,901	\$6,071 60	\$104,115	\$2,392 21	\$833 86	\$26,659	\$925,452	\$230,774				
	Sidings		4.665	15,841	1,214 32	5,592	472 44	106 77	768	18,017	6,360				
	Totals.....		38.576	\$505,742		\$109,707				\$943,440	\$237,134				
Pacfic.....	Main Line	39.00													
	Main Track		23.651	\$406,797	\$6,708 00	\$153,651	\$2,392 21	\$271 26	\$21,739	\$462,066	\$180,440				
	Sidings		4.931	17,031	1,341 00	6,642	472 44	184 25	912	19,370	7,554				
	Totals.....		28.602	\$423,828		\$160,293				\$482,036	\$187,994				
Thurston...	Main Line	40.00													
	Main Track		10.298	\$177,136	\$4,980 00	\$70,850	\$2,392 21	\$244 00	\$9,731	\$201,482	\$80,531				
	Sidings		1.556	5,358	1,376 00	2,141	472 44	169 98	204	6,166	2,435				
	Totals.....		11.854	\$182,476		\$72,991				\$207,648	\$82,966				

Totals.....	Main Line—	65.920	\$17,200 00	\$1,183,824	\$423,616	\$2,362 21	\$55,717	\$58,179	\$1,292,541	\$481,795
	Main Track	11.112	8,440 00	38,225	14,375	472 44	5,250	1,974	48,475	16,349
	Sidings									
	Totals	77.032		\$1,172,049	\$437,991		\$160,967	\$60,153	\$1,333,016	\$498,144

PUGET SOUND & BAKER RIVER RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value
Skagit.....	Main Line	30.20	21.376	\$7,900 00	\$108,870	\$2,385 80	\$50,969	\$722 70	\$15,448	\$35,664
	Main Track		1.049	1,580 00	1,668	477 16	501	144 54	132	547
	Sidings									
	Totals		22.425		\$170,538		\$51,500		\$15,580	\$36,211

PORT TOWNSEND SOUTHERN RAILROAD.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value
Jefferson.....	Main Line	44.00	26.370	\$10,417 07	\$276,782	\$4,583 51	\$121,784	\$692 79	\$22,924	\$131,871
	Main Track		2.062	2,083 41	4,233	916 70	1,683	172 56	351	2,017
	Sidings									
	Totals		28.602		\$281,015		\$123,647		\$23,275	\$133,888

Schedule "C"—Table I.—Steam Railroads—Continued.

SPOKANE INTERNATIONAL RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ans'd ratio actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value		
Spokane.....	Main Line	39.30	19,550	\$21,935 68	\$34,430	\$3,001 05	\$170,731	\$2,298 66	\$45,628	\$308 37	\$17,983	\$480,058	\$198,683
	Main Track		8,996	4,877 13	39,070	1,720 21	15,353	439 74	4,104	180 66	1,612	43,174	16,967
	Totals.....		28,776		\$478,500		\$186,086		\$49,732		\$19,544	\$523,232	\$205,650
EQUIPMENT (ONLY) OVER FOREIGN LINES.													
Spokane.....	Main Line	39.30											
	(Over O. W. R. R. & N. Co.)												
	Main Track		769					\$2,298 66	\$1,768	\$308 37	\$306	\$1,768	\$935
	Grand Totals.....		29,545		\$478,500		\$186,086		\$51,500		\$20,239	\$525,000	\$206,325

PULLMAN COMPANY (Equipment only).

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value
Adams		42.00					\$28,281	\$11,878	\$28,281	\$11,878
Benton		43.00					16,119	6,981	16,119	6,981
Chelan		40.80					2,441	998	2,441	998
Clarke		32.00					15,078	5,428	15,078	5,428
Colusa		35.00					1,516	570	1,516	570
Cowlitz		30.00					36,724	10,876	36,724	10,876
Everett		38.40					10,229	3,674	10,229	3,674

	16,065	6,988	16,065	6,988
Franklin.....	16,065	6,988	16,065	6,988
Grant.....	2,196	862	2,196	862
Grays Harbor.....	5,983	2,255	5,983	2,255
King.....	58,762	27,081	58,762	27,081
Kittitas.....	35,898	18,817	35,898	18,817
Lewis.....	26,858	9,481	26,858	9,481
Lincoln.....	9,270	3,829	9,270	3,829
Pend Oreille.....	577	234	577	234
Perce.....	37,965	17,654	37,965	17,654
Spokane.....	9,081	816	9,081	816
Spokane.....	25,751	10,120	25,751	10,120
Thurston.....	27,897	10,869	27,897	10,869
Walla Walla.....	30,221	12,891	30,221	12,891
Whitman.....	9,715	3,760	9,715	3,760
Yakima.....	21,765	10,077	21,765	10,077
Totals.....	\$410,877	\$167,252	\$410,877	\$167,252

SEATTLE, PORT ANGELES & WESTERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value
Clallam.....	Main Line	50.00										
	Main Track	59.322	\$12,750 00	\$756,738	\$4,375 00	\$378,269	\$3,375 11	\$200,320	\$1,687 56	\$100,160	\$657,038	\$478,629
	Sidings	12.283	2,550 00	31,271	1,275 00	15,636	675 02	8,278	337 51	4,136	39,546	19,775
	Totals	71.615			\$788,009			\$394,005		\$104,296	\$906,607	\$498,304
Jefferson.....	Main Line	44.00										
	Main Track	9.228	\$12,750 00	\$117,657	\$5,610 00	\$51,769	\$3,375 11	\$31,145	\$1,485 06	\$13,704	\$148,822	\$65,473
	Sidings	1.062	2,550 00	2,708	1,122 00	1,192	675 02	717	297 01	315	3,425	1,507
	Totals	10.290			\$120,365			\$52,961		\$14,019	\$152,227	\$66,980
Totals....	Main Line—											
	Main Track	68.580	\$12,750 00	\$874,395		\$430,138	\$3,375 11	\$231,465		\$113,864	\$1,105,890	\$544,002
	Sidings	13.325	2,550 00	83,979		16,828	675 02	8,906		4,454	42,974	21,282
	Totals	81.905			\$908,374			\$446,966		\$118,318	\$1,148,834	\$565,284

Stamania.....	40.00	40.877	\$94,850 00	\$8,849,729	\$87,940 00	\$1,589,491	\$4,014 77	\$102,907	\$1,606 91	\$65,186	\$4,011,685	\$1,604,654
Main Track		9.616	18,970 00	182,416	7,568 00	72,866	892 96	7,721	821 19	3,069	180,137	76,055
Sidings												
Totals		50.193		\$4,081,144		\$1,612,457		\$170,628		\$68,253	\$4,201,772	\$1,680,709
Spokane.....	39.80	34.551	\$94,850 00	\$9,280,009	\$87,276 06	\$1,299,043	\$4,014 77	\$138,886	\$1,577 80	\$64,662	\$8,418,843	\$1,343,605
Main Track		6.901	18,970 00	180,912	7,455 21	51,448	892 96	5,541	315 56	2,178	186,488	68,628
Sidings												
Totals		41.452		\$8,410,920		\$1,340,491		\$144,376		\$66,740	\$8,565,296	\$1,387,231
Whitman.....	38.70	8.172	\$94,850 00	\$715,114	\$66,706 96	\$239,969	\$4,014 77	\$32,809	\$1,553 72	\$12,637	\$607,923	\$612,666
Main Track		7.367	18,970 00	139,562	7,341 39	54,011	892 96	5,907	310 74	2,296	145,469	66,297
Sidings												
Totals		15.539		\$914,676		\$683,960		\$68,716		\$14,933	\$663,392	\$688,963
Totals.....												
Main Line—												
Main Track		365.083	\$94,850 00	\$84,628,380		\$14,190,381	\$4,014 77	\$1,465,624		\$600,648	\$86,088,904	\$14,791,024
2nd Main Track		410	28,485 00	11,687		4,200	1,204 43			178	12,161	4,373
Sidings		97.467	18,970 00	1,849,949		741,000	892 96	78,261		31,366	1,927,210	772,469
Branch Lines—												
Main Track		42.212	28,485 00	1,201,142		480,457	1,204 43	50,841		20,336	1,261,938	500,798
Sidings		3.863	9,485 00	31,686		12,759	401 43	1,860		540	38,248	13,299
Totals		508.495		\$87,717,066		\$15,429,867		\$1,566,470		\$68,066	\$89,313,506	\$16,081,968

SPOKANE & BRITISH COLUMBIA RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equal-ized rate per mile	Rate per mile, actual value	Actual value	Equal-ized rate per mile	Actual value	Equalized value
Perry.....	Main Line	45.50	36.400	\$6,777 26	\$187,492	\$1,718 66					
	Main Track		4.160	756 45	3,143	343 73	\$64 10	\$12,416	\$155 20	\$5,649	\$98,208
	Sidings						69 22	284	31 04	129	1,569
	Totals		40.560		\$140,685			\$12,700		\$6,778	\$99,767

Schedule "C"—Table I.—Steam Railroads—Concluded.

WASHINGTON, IDAHO & MONTANA RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized rate per mile	Actual value	Equal- ized rate per mile	Actual value	Equalized value
Whitman....	Main Line	38.70								
	Main Track	3.330	\$22,369 92	\$74,492	\$8,067 15	\$28,828	\$5,880 16	\$22,844	\$8,841	\$37,689
	Sidings	2.300	4,473 96	10,230	1,731 43	3,063	1,373 08	3,156	1,221	5,204
	Totals.....	5.630		\$84,732		\$32,811		\$25,000	\$10,062	\$42,873

TACOMA EASTERN RAILROAD.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equalized rate per mile	Equalized value	Rate per mile, actual value	Actual value	Equalized value
Lewis.....	Branch Lines.....	35.30								
	Main Track.....	17.554	\$15,797.36	\$277,807	\$97,880	\$6,465.80	\$113,325	\$40,000	\$800,082	\$137,808
	Sidings.....	6.822	2,430.30	16,560	587.92	5,533	938.20	2,362	23,356	8,246
	Totals.....			\$298,887	\$108,742		\$120,101	\$42,362	\$118,988	\$141,138
Pierce.....	Main Line.....	46.50								
	Main Track.....	50.064	\$24,308.61	\$1,216,726	\$11,301.19	\$9,988.00	\$497,238	\$231,215	\$1,713,971	\$758,907
	Siding.....	24.352	4,860.72	118,368	2,200.23	1,686.40	45,573	22,686	100,741	77,384
	Branch Lines.....	30.968	15,797.36	331,624	7,345.77	6,455.80	135,527	68,000	467,161	217,280
	Sidings.....	5.000	2,430.30	12,382	1,130.12	5,703	938.20	2,365	17,100	6,117
	Totals.....			\$1,670,180	\$780,705		\$680,199	\$310,648	\$2,091,874	\$1,000,874

[illegible]

WASHINGTON WESTERN RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	REAL PROPERTY Right-of-Way and Tracks				PERSONAL PROPERTY Equipment and Rolling Stock				TOTAL VALUATION Real and Personal Property	
			Mileage	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized value	Actual value
Snohomish...	Main Line	40.40	11.119	\$7,500 00	\$83,302	\$8,080 00	\$83,600	\$605 16	\$7,300	\$2,068	\$86,678	
	Main Track		.782	1,600 00	1,173	806 00	474	133 02	104	42	1,277	
	Sidings											
	Totals.....		11.901	.....	\$84,565	.....	\$84,164	.....	\$7,500	\$6,090	\$87,194	

WATERVILLE RAILWAY.

COUNTIES	CLASSIFICATION OF TRACK	Ass'd ratio to actual value (Pct.)	Mileage	REAL PROPERTY Right-of-Way and Tracks			PERSONAL PROPERTY Equipment and Rolling Stock			TOTAL VALUATION Real and Personal Property	
				Rate per mile, actual value	Actual value	Equal- ized rate per mile	Equal- ized rate per mile	Actual value	Equal- ized rate per mile	Actual value	Equalized value
Douglas.....	Main Line	39.40	5.092	\$6,000 00	\$40,798	\$3,072 00	\$15,643	\$1,462 87	\$2,880	\$48,186	\$18,508
	Main Track .....	.....	1.660	1,600 00	2,718	614 40	1,044	292 57	191	3,215	1,295
	Sidings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	.....	6.751	.....	\$43,454	.....	\$16,687	\$7,946	\$8,051	\$51,400	\$19,798

SCHEDULE "C"—Table II.—INTERURBAN LINES (Electric).

NAME OF ROAD	COUNTY	Assessed ratio to actual value (Pct.)	CLASSIFICATION OF TRACK	AS REAL PROPERTY		AS PERSONAL PROPERTY		TOTAL REAL AND PERSONAL PROPERTY	
				Actual value	Equalized value	Actual value	Equalized value	Actual value	Equalized value
North Coast Power Company.....	Clarke.....	36.00	Street Railway Lines.....	.....	.....	\$119,782	\$43,122	\$119,782	\$43,122
	Lewis.....	35.30	Interurban Lines.....	\$30,100	\$7,296	13,180	4,745	33,280	11,961
			Street Railway Lines.....	.....	.....	171,513	60,544	171,513	60,544
			Interurban Lines.....	13,200	4,060	18,350	6,477	31,550	11,137
			Totals.....	\$33,300	\$11,806	\$322,825	\$114,888	\$356,125	\$126,784
Pacific Northwest Traction Company.....	King.....	46.00	Interurban Lines.....	\$334,292	\$153,761	\$55,862	\$25,706	\$390,144	\$179,467
	Skagit.....	30.20	Interurban Lines.....	774,429	233,878	190,222	57,447	964,651	291,325
	Snohomish.....	40.40	Interurban Lines.....	719,488	290,873	120,287	45,566	839,775	339,249
	Whatcom.....	35.40	Interurban Lines.....	279,821	98,890	68,609	24,297	347,980	123,167
			Totals.....	\$2,107,500	\$777,192	\$435,000	\$156,036	\$2,542,500	\$933,228
Puget Sound Electric Company.....	King.....	46.00	Interurban Lines.....	\$1,063,437	\$779,981	\$196,153	\$99,770	\$1,259,590	\$879,751
	Pierce.....	46.50	Interurban Lines.....	817,231	300,013	94,179	43,738	911,410	423,800
			Totals.....	\$2,510,668	\$1,158,994	\$290,332	\$133,508	\$2,800,000	\$1,292,557
Spokane & Inland Empire Railroad Co.....	Spokane.....	39.30	Interurban Lines.....	\$3,127,300	\$1,229,064	\$243,661	\$95,771	\$3,370,961	\$1,324,835
	Whitman.....	38.70	Street Railway Lines.....	.....	.....	1,330,000	521,118	1,330,000	521,118
			Interurban Lines.....	2,878,610	1,114,022	224,809	88,608	3,103,419	1,202,880
			Totals.....	\$6,005,910	\$2,343,086	\$1,794,000	\$708,697	\$7,800,000	\$3,046,788
Washington Water Power Company.....	Spokane.....	30.30	Interurban Lines.....	\$140,000	\$65,020	\$476,375	\$187,215	\$616,375	\$242,235
			Street Railway Lines.....	.....	.....	2,028,875	1,033,146	2,028,875	1,033,146
			Totals.....	\$140,000	\$65,020	\$6,106,250	\$1,250,363	\$6,246,250	\$1,375,389

Walla Walla Valley Railway Company.....	Walla Walla...	41.00	Interurban Lines.....	\$122,400	\$50,124	\$41,700	\$17,122	\$164,100	\$87,808
			Street Railway Lines...	.....	.....	100,840	66,944	100,840	66,944
			Totals.....	\$122,400	\$50,124	\$502,600	\$38,068	\$322,000	\$138,250
Yakima Valley Transportation Company....	Yakima.....	46.80	Interurban Lines.....	\$123,500	\$57,150	\$55,125	\$50,183	\$158,625	\$57,333
			Street Railway Lines...	.....	.....	216,875	100,413	216,875	100,413
			Totals.....	\$123,500	\$57,150	\$232,000	\$130,596	\$405,500	\$157,746
			Grand Totals.....	\$11,043,368	\$4,463,532	\$6,431,007	\$2,542,179	\$17,471,375	\$8,998,731

SCHEDULE "C"—Table III.—STREET RAILWAYS.

NAME OF ROAD	COUNTY	Assessed ratio to actual value (Pct.)	OPERATING PROPERTY (Assessed as personal property)	
			Actual value	Equalized value
Grays Harbor Railway and Light Company..	Grays Harbor....	38.0	\$1,050,000	\$389,000
Lewiston-Clarkston Transit Company.....	Asotin.....	44.8	20,000	8,900
Olympia Light and Power Company.....	Thurston.....	40.0	302,000	144,900
Pacific Traction Company.....	Pierce.....	46.5	290,000	124,850
Puget Sound International Railway and Power Company	Snohomish.....	40.4	1,300,000	325,300
Puget Sound Traction, Light and Power Co..	King.....	46.0	16,686,000	7,673,300
	Snohomish.....	40.4	195,500	78,982
	Whatecom.....	35.4	1,780,000	630,120
	Totals.....		\$18,661,500	\$8,384,002
Seattle and Rainier Valley Railway Company.	King.....	46.0	\$1,050,000	\$483,000
Tacoma Railway and Power Company.....	Pierce.....	46.5	3,385,000	1,574,025
Western Washington Power Company.....	King.....	46.0	39,000	17,940
Willapa Electric Company.....	Pacific.....	39.0	87,000	38,980
Totals.....			\$26,244,500	\$11,706,367

**SCHEDULE "C"—Table IV.—RECAPITULATION OF STEAM RAILROADS—
VALUATIONS BY COUNTIES.**

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Per.)	Actual value	Equalized value
1. ADAMS	42.00		
Chicago, Milwaukee & St. Paul Railway.....		\$7,268,301	\$5,052,725
Northern Pacific Railway.....		6,662,438	2,752,024
Oregon-Washington Railroad & Navigation Company.....		4,080,069	1,662,641
Pullman Company (Equipment only).....		28,281	11,878
Spokane, Portland & Seattle Railway.....		4,360,109	1,843,846
Totals.....		\$22,299,318	\$9,358,114
2. ASOTIN	44.80		
3. BENTON	43.00		
Chicago, Milwaukee & St. Paul Railway.....		\$491,155	\$211,196
Northern Pacific Railway.....		4,875,066	2,066,291
Oregon-Washington Railroad & Navigation Company.....		1,796,067	771,019
Pullman Company (Equipment only).....		16,119	6,981
Spokane, Portland & Seattle Railway.....		6,623,922	2,850,436
Totals.....		\$13,804,359	\$5,985,873
4. CHELAN	40.90		
Great Northern Railway.....		\$6,798,108	\$3,598,426
Pullman Company (Equipment only).....		2,441	968
Totals.....		\$6,800,549	\$3,599,424
5. CLALLAM	50.00		
Seattle, Port Angeles & Western Railway.....		\$606,607	\$466,304
Totals.....		\$606,607	\$466,304
6. CLARKE	36.00		
Great Northern Railway.....		\$205,534	\$74,010
Northern Pacific Railway.....		3,159,296	1,139,983
Oregon-Washington Railroad & Navigation Company.....		123,341	44,408
Pullman Company (Equipment only).....		15,079	5,423
Spokane, Portland & Seattle Railway.....		2,635,841	948,723
Totals.....		\$6,137,690	\$2,209,547
7. COLUMBIA	38.00		
Northern Pacific Railway.....		\$302,311	\$114,878
Oregon-Washington Railroad & Navigation Company.....		3,509,386	1,333,567
Pullman Company (Equipment only).....		1,515	576
Totals.....		\$3,813,212	\$1,449,021
8. COWLITZ	30.00		
Great Northern Railway.....		\$462,319	\$138,696
Northern Pacific Railway.....		5,238,386	1,571,515
Oregon-Washington Railroad & Navigation Company.....		255,256	76,571
Pullman Company (Equipment only).....		36,524	10,957
Totals.....		\$5,992,484	\$1,797,745

Schedule "C"—Table IV.—Continued.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
9. DOUGLAS	38.40		
Great Northern Railway.....		\$8,575,889	\$1,206,149
Pullman Company (Equipment only).....		878	220
Waterville Railway		51,400	19,728
Totals.....		\$8,427,302	\$1,216,107
10. FERRY	45.50		
Great Northern Railway.....		\$2,084,106	\$948,288
Spokane & British Columbia Railway.....		158,836	69,767
Totals.....		\$2,287,441	\$1,018,085
11. FRANKLIN	43.50		
Northern Pacific Railway.....		\$6,882,260	\$2,776,273
Oregon-Washington Railroad & Navigation Company.....		1,411,722	614,099
Pullman Company (Equipment only).....		16,065	6,988
Spokane, Portland & Seattle Railway.....		5,906,228	2,608,369
Totals.....		\$13,806,265	\$6,005,724
12. GARFIELD	33.00		
Oregon-Washington Railroad & Navigation Company.....		\$598,591	\$198,575
Totals.....		\$598,591	\$198,575
13. GRANT	39.50		
Chicago, Milwaukee & St. Paul Railway.....		\$3,762,913	\$1,492,401
Great Northern Railway.....		6,015,044	2,375,942
Northern Pacific Railway.....		2,620,581	1,067,480
Pullman Company (Equipment only).....		2,159	852
Totals.....		\$12,399,046	\$4,896,675
14. GRAYS HARBOR	38.00		
Chicago, Milwaukee & St. Paul Railway.....		\$170,079	\$64,029
Northern Pacific Railway.....		3,574,236	1,358,231
Oregon-Washington Railroad & Navigation Company.....		2,011,068	764,302
Pullman Company (Equipment only).....		5,983	2,255
Totals.....		\$5,761,363	\$2,189,317
15. ISLAND	46.00		
16. JEFFERSON	44.00		
Port Townsend Southern Railroad Company.....		\$304,230	\$133,386
Seattle, Port Angeles & Western Railway.....		152,227	66,960
Milwaukee Terminal Railway.....		41,080	18,049
Totals.....		\$497,537	\$218,917
17. KING	46.00		
Canadian Pacific Railway (Equipment only).....		\$18,870	\$8,450
Chicago, Milwaukee & St. Paul Railway.....		6,896,542	3,188,288
Great Northern Railway.....		6,210,822	2,856,767
Milwaukee Terminal Railway.....		72,500	33,350
Northern Pacific Railway.....		17,792,496	8,124,548
Oregon-Washington Railroad & Navigation Company.....		1,601,916	738,882
Pacific Coast Railway.....		3,800,000	1,610,000
Pullman Company (Equipment only).....		58,702	27,051
Totals.....		\$36,120,246	\$16,615,316

Schedule "C"—Table IV.—Continued.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
18. KITSAP	44.00		
Milwaukee Terminal Railway.....		\$72,680	\$81,979
Totals.....		\$72,680	\$81,979
19. KITTITAS	38.50		
Chicago, Milwaukee & St. Paul Railway.....		\$6,187,360	\$8,152,137
Northern Pacific Railway.....		8,799,380	3,837,754
Pullman Company (Equipment only).....		35,888	18,517
Totals.....		\$17,022,617	\$6,568,708
20. KLIKITAT	40.00		
Oregon Trunk Railway.....		\$125,450	\$60,180
Spokane, Portland & Seattle Railway.....		10,744,138	4,297,655
Totals.....		\$10,869,588	\$4,847,825
21. LEWIS	35.30		
Cowlitz, Chehalis & Cascade Railway.....		\$169,625	\$59,878
Great Northern Railway.....		370,118	130,650
Northern Pacific Railway.....		5,554,987	1,980,910
Oregon-Washington Railroad & Navigation Company.....		482,707	170,395
Pullman Company (Equipment only).....		26,858	9,481
Tacoma Eastern Railroad.....		413,988	146,133
Puget Sound & Willapa Harbor Railway.....		643,440	227,134
Totals.....		\$7,661,718	\$2,704,586
22. LINCOLN	41.30		
Chicago, Milwaukee & St. Paul Railway.....		\$54,728	\$22,608
Great Northern Railway.....		6,618,515	2,733,447
Northern Pacific Railway.....		4,581,449	1,892,139
Oregon-Washington Railroad & Navigation Company.....		642,054	265,168
Pullman Company (Equipment only).....		9,270	3,829
Spokane, Portland & Seattle Railway.....		208,308	86,081
Totals.....		\$12,114,324	\$5,008,217
23. MASON	38.30		
Blakely Railroad		\$135,480	\$51,889
Northern Pacific Railway.....		24,496	9,382
Peninsular Railway		297,010	113,755
Totals.....		\$456,986	\$175,026
24. OKANOGAN	40.20		
Great Northern Railway.....		\$3,984,085	\$1,601,602
Totals.....		\$3,984,085	\$1,601,602
25. PACIFIC	39.00		
Northern Pacific Railway.....		\$1,123,223	\$438,057
Oregon-Washington Railroad & Navigation Company.....		786,136	298,798
Puget Sound & Willapa Harbor Railway.....		482,086	187,994
Totals.....		\$2,391,445	\$924,849

Schedule "C"—Table IV.—Continued.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
26. PEND OREILLE	40.60		
Great Northern Railway.....		\$1,028,222	\$680,458
Chicago, Milwaukee & St. Paul Railway.....		2,170,205	861,128
Pullman Company (Equipment only).....		577	224
Totals.....		\$3,699,004	\$1,501,810
27. PIERCE	46.50		
Chicago, Milwaukee & St. Paul Railway.....		\$1,943,275	\$908,023
Great Northern Railway.....		474,811	220,789
Milwaukee Terminal Railway.....		234,820	109,191
Northern Pacific Railway.....		10,900,423	4,852,689
Oregon-Washington Railroad & Navigation Company.....		686,098	295,731
Pullman Company (Equipment only).....		37,965	17,654
Tacoma Eastern Railroad.....		2,365,329	1,099,878
Totals.....		\$16,192,716	\$7,529,614
28. SAN JUAN	39.60		
29. SKAGIT	30.20		
Canadian Pacific Railway (Equipment only).....		\$20,837	\$6,238
Great Northern Railway.....		4,448,831	1,342,088
Northern Pacific Railway.....		3,124,624	948,637
Puget Sound & Baker River Railway.....		186,128	56,211
Totals.....		\$7,775,420	\$2,368,179
30. SKAMANIA	40.00		
Spokane, Portland & Seattle Railway.....		\$4,201,772	\$1,680,700
Totals.....		\$4,201,772	\$1,680,700
31. SNOHOMISH	40.40		
Canadian Pacific Railway (Equipment only).....		\$80,223	\$22,210
Chicago, Milwaukee & St. Paul Railway.....		746,078	301,416
Great Northern Railway.....		10,504,224	4,243,707
Marysville & Arlington Railway.....		131,135	52,979
Northern Pacific Railway.....		7,336,291	2,963,862
Pullman Company (Equipment only).....		2,021	816
Washington Western Railway.....		92,065	37,194
Totals.....		\$18,842,057	\$7,612,184
32. SPOKANE	39.80		
Chicago, Milwaukee & St. Paul Railway.....		\$1,964,365	\$779,894
Great Northern Railway.....		7,546,020	2,965,186
Northern Pacific Railway.....		8,444,556	3,318,723
Oregon-Washington Railroad & Navigation Company.....		6,543,880	2,571,789
Pullman Company (Equipment only).....		25,751	10,120
Spokane International Railway.....		525,000	205,275
Spokane, Portland & Seattle Railway.....		3,556,296	1,397,231
Totals.....		\$25,622,906	\$11,249,195

Schedule "C"—Table IV.—Concluded.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
33. STEVENS	32.50		
Great Northern Railway.....		\$4,282,511	\$1,391,816
Totals.....		\$4,282,511	\$1,391,816
34. THURSTON	40.00		
Chicago, Milwaukee & St. Paul Railway.....		\$1,071,192	\$428,477
Great Northern Railway.....		239,178	95,669
Northern Pacific Railway.....		5,590,230	2,232,092
Oregon-Washington Railroad & Navigation Company..		775,199	310,079
Pullman Company (Equipment only).....		27,897	10,360
Puget Sound & Willapa Harbor Railway.....		207,640	83,016
Totals.....		\$7,900,730	\$8,160,292
35. WAHIAKUM	35.00		
36. WALLA WALLA	41.00		
Northern Pacific Railway.....		\$4,298,991	\$1,758,495
Oregon-Washington Railroad & Navigation Company..		10,104,473	4,142,834
Pullman Company (Equipment only).....		30,221	12,391
Totals.....		\$14,423,685	\$5,913,711
37. WHATOOM	35.40		
Bellingham & Northern Railway.....		\$1,362,145	\$490,279
Canadian Pacific Railway (Equipment only).....		20,570	7,282
Great Northern Railway.....		3,347,888	1,185,135
Milwaukee Terminal Railway.....		87,900	13,438
Northern Pacific Railway.....		3,812,180	1,349,512
Totals.....		\$9,600,693	\$3,044,646
38. WHITMAN	38.70		
Chicago, Milwaukee & St. Paul Railway.....		\$5,207,181	\$2,015,179
Northern Pacific Railway.....		3,747,596	1,450,316
Oregon-Washington Railroad & Navigation Company..		13,783,878	5,334,361
Pullman Company (Equipment only).....		9,715	3,760
Spokane, Portland & Seattle Railway.....		953,592	368,993
Washington, Idaho & Montana Railway.....		110,782	42,873
Totals.....		\$23,812,684	\$9,215,462
39. YAKIMA	46.30		
Chicago, Milwaukee & St. Paul Railway.....		\$171,547	\$79,426
Northern Pacific Railway.....		9,085,181	4,183,369
Oregon-Washington Railroad & Navigation Company..		1,717,064	795,278
Pullman Company (Equipment only).....		21,765	10,077
Totals.....		\$10,946,157	\$5,068,070
GRAND TOTALS		\$640,502,230	\$128,355,179

**SCHEDULE "C" — Table V. — RECAPITULATION OF STEAM RAILROADS — VALUATIONS BY RAILROADS
FOR THE YEAR 1918.**

	NAME OF ROADS	REAL PROPERTY		PERSONAL PROPERTY		TOTAL VALUATION	
		Right-of-Way and Tracks		Equipment and Rolling Stock		Real and Personal Property	
		Actual value	Equalized value	Actual value	Equalized value	Actual value	Equalized value
1	Bellingham & Northern Railway.....	\$1,179,535	\$417,555	\$302,610	\$71,724	\$1,332,145	\$489,279
2	Blakely Railroad.....	99,980	36,255	35,590	13,604	135,480	51,899
3	Canadian Pacific Railway (Equipment only).....			50,000	34,235	50,000	34,235
4	Chicago, Milwaukee & St. Paul Railroad.....	35,500,975	14,689,884	4,568,425	1,908,553	40,069,400	16,598,437
5	Cowlitz, Chehalis & Cascade Railway.....	139,125	49,111	30,500	10,767	169,625	60,878
6	Great Northern Railway.....	62,474,625	24,672,220	8,014,680	3,148,531	70,489,305	27,820,751
7	Marysville & Alington Railway.....	121,685	49,151	9,500	3,868	131,185	53,019
8	Milwaukee Teledyne Railway Company.....	218,880	99,111	240,000	106,886	458,880	206,007
9	Northern Pacific Railway.....	105,777,760	43,334,256	20,677,940	8,464,820	126,455,700	51,799,086
10	Oregon Trunk Railway.....	121,120	46,448	4,380	1,732	125,500	48,180
11	Oregon-Washington Railroad & Navigation Company.....	47,014,560	18,950,501	3,759,940	1,480,862	50,774,500	20,431,363
12	Pacific Coast Railroad.....	3,259,814	1,460,814	260,186	119,695	3,520,000	1,610,000
13	Peninsular Railway.....	178,710	68,446	118,300	46,809	297,010	115,156
14	Port Townsend Southern Railroad.....	281,015	123,647	23,275	10,241	304,290	133,888
15	Puget Sound & Baker River Railway.....	170,629	51,500	15,600	4,711	186,129	56,211
16	Puget Sound & Willapa Harbor Railway.....	1,172,049	487,991	160,987	60,158	1,333,016	498,144
17	Pullman Company (Equipment only).....			410,877	167,252	410,877	167,252
18	Seattle, Port Angeles & Western Railway.....	908,374	446,995	240,460	118,818	1,148,834	566,812
19	Spokane & British Columbia Railway.....	140,685	68,989	12,700	5,778	153,385	74,767
20	Spokane International Railway.....	473,500	186,086	20,239	9,000	493,739	195,086
21	Spokane, Portland & Seattle Railway.....	37,717,086	15,426,867	1,586,470	653,006	39,303,556	16,081,963
22	Tacoma Eastern Railroad.....	1,973,017	864,587	906,300	361,479	2,879,317	1,246,016
23	Washington, Idaho & Montana Railway.....	84,782	34,781	26,000	10,092	110,782	44,873
24	Washington Western Railway.....	84,595	34,164	7,500	3,090	92,095	37,194
25	Waterville Railway.....	43,454	16,687	7,948	3,051	51,402	19,789
	Totals.....	\$299,115,754	\$121,584,507	\$41,386,476	\$16,820,672	\$340,502,230	\$138,365,179

**SCHEDULE "C"—Table VI.—RECAPITULATION OF ELECTRIC RAILWAYS—
VALUATIONS BY COUNTIES.**

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
ASOTIN	44.80		
Lewiston-Clarkston Transit Company.....		\$20,000	\$8,980
CLARKE	35.00		
North Coast Power Company.....		\$158,082	\$55,108
GRAYS HARBOR	38.00		
Grays Harbor Railway & Light Company.....		\$1,050,080	\$890,000
KING	46.00		
Pacific Northwest Traction Company.....		\$380,144	\$179,467
Puget Sound Electric Company.....		1,888,590	868,751
Puget Sound Traction, Light & Power Company.....		16,888,000	7,675,580
Seattle & Rainier Valley Railway Company.....		1,050,000	483,000
Western Washington Power Company.....		30,000	17,940
Totals.....		\$20,058,734	\$9,224,718
LEWIS	35.80		
North Coast Power Company.....		\$208,068	\$71,061
PACIFIC	39.00		
Willapa Electric Company.....		\$87,000	\$33,980
PIERCE	46.50		
Pacific Traction Company.....		\$290,000	\$134,860
Puget Sound Electric Company.....		911,410	423,806
Tacoma Railway & Power Company.....		3,385,000	1,574,025
Totals.....		\$4,586,410	\$2,132,681
SKAGIT	30.20		
Pacific Northwest Traction Company.....		\$964,651	\$291,325
SNOHOMISH	40.40		
Puget Sound International Railway & Power Company.....		\$1,300,000	\$525,200
Pacific Northwest Traction Company.....		839,775	339,269
Puget Sound Traction, Light & Power Company.....		195,500	78,982
Totals.....		\$2,335,275	\$943,451
SPOKANE	39.30		
Spokane & Inland Empire Railroad Company.....		\$4,697,081	\$1,845,968
Washington Water Power Company.....		3,245,250	1,275,383
Totals.....		\$7,942,331	\$3,121,356

Schedule "C"—Table VI—Concluded.

NAME OF ROADS BY COUNTIES	Assessed ratio to actual value (Pct.)	Actual value	Equalized value
THURSTON	40.00		
Olympia Light & Power Company.....		\$992,000	\$144,800
WALLA WALLA	41.00		
Walla Walla Valley Railway Company.....		\$625,000	\$133,230
WHATCOM	35.40		
Pacific Northwest Traction Company.....		\$347,980	\$123,167
Puget Sound Traction, Light & Power Company.....		1,780,000	630,120
Totals.....		\$2,127,980	\$758,287
WHITMAN	38.70		
Spokane & Inland Empire Railroad Company.....		\$3,102,919	\$1,200,830
YAKIMA	46.30		
Yakima Valley Transportation Company.....		\$405,500	\$187,746
GRAND TOTALS.....		\$48,718,875	\$18,702,066

SCHEDULE "C"—Table VII.—TELEGRAPH COMPANIES.

COUNTIES	Assessed ratio to actual (Pct.)	WESTERN UNION TELEGRAPH COMPANY				POSTAL TELEGRAPH-CABLE COMPANY				TOTAL TELEGRAPH COMPANIES			
		Wire mileage	Actual value	Equalized value		Wire mileage	Actual value	Equalized value		Wire mileage	Actual value	Equalized value	
1 Adams	42.00	411.87	\$32,950	\$13,889		180.00	\$10,080	\$4,294		591.87	\$43,030	\$18,073	1
2 Asotin	44.80												2
3 Benton	43.00	196.80	15,744	6,770						196.80	15,744	6,770	3
4 Chelan	40.00	67.08	5,369	2,186						67.08	5,369	2,186	4
5 Okanogan	50.00	80.88	6,430	3,215						80.88	6,430	3,215	5
6 Clark	36.00												6
7 Columbia	38.00	201.19	16,005	6,116						201.19	16,005	6,116	7
8 Cowlitz	30.00	342.88	27,426	8,293		169.00	9,409	2,822		510.88	36,834	11,050	8
9 Douglas	38.40	15.80	1,264	485						15.80	1,264	485	9
10 Ferry	45.50												10
11 Franklin	43.00	880.64	26,451	11,506						880.64	26,451	11,506	11
12 Garfield	33.00	31.08	2,496	880						31.08	2,496	880	12
13 Grant	39.50	90.10	7,908	2,847		156.00	8,736	3,451		246.10	16,644	6,238	13
14 Grays Harbor	38.00	86.22	6,888	2,621						86.22	6,888	2,621	14
15 Island	40.00												15
16 Jefferson	44.00	86.10	6,806	2,666						86.10	6,806	2,666	16
17 King	40.00	903.35	72,205	33,222		482.02	25,347	11,060		1,385.35	97,613	44,902	17
18 Kitsap	44.00	48.40	3,872	1,704						48.40	3,872	1,704	18
19 Kittitas	38.50	344.46	27,557	10,610		270.00	15,120	5,821		614.46	42,677	16,431	19
20 Klickitat	40.00												20
21 Lewis	35.30	279.77	22,982	7,801		168.00	9,409	3,821		447.77	31,790	11,222	21
22 Lincoln	41.30	215.46	17,237	7,119		42.00	2,852	971		257.46	19,589	8,000	22
23 Mason	38.30												23
24 Okanogan	40.20												24
25 Pacific	39.00	38.32	2,966	1,040						38.32	2,966	1,040	25
26 Pend Oreille	40.60	14.76	1,161	479						14.76	1,161	479	26
27 Pierce	46.50	531.22	42,469	19,762		299.90	16,704	7,809		831.12	59,262	27,571	27
28 San Juan	39.00												28
29 Skagit	30.20	216.28	17,392	5,225		118.00	6,608	1,966		334.28	23,910	7,221	29
30 Skamania	40.00												30
31 Snohomish	40.40	338.88	29,109	11,760		301.75	11,298	4,564		640.63	40,407	16,324	31
32 Spokane	39.30	638.12	68,650	26,980		145.00	8,190	3,191		1,008.12	76,770	30,171	32
33 Stevens	32.50												33
34 Thurston	40.00	285.64	22,551	9,140		140.00	7,840	3,136		425.64	30,391	12,276	34
35 Wahkiakum	35.00												35
36 Walla Walla	41.00	445.76	35,600	14,671						445.76	35,600	14,671	36
37 Whitman	35.40	109.60	8,784	3,110		145.30	8,187	2,880		255.10	16,921	6,590	37
38 Yakima	35.70	1,011.62	80,822	31,317						1,011.62	80,822	31,317	38
39	46.30	250.27	20,021	9,270						250.27	20,021	9,270	39
Totals		7,851.05	\$629,064	\$254,918		2,486.57	\$139,248	\$65,866		10,337.62	\$767,862	\$310,774	

SCHEDULE "D"—Abstract Showing Total Assessment of All Taxable Property in the State of Washington for the Year 1918.

COUNTIES		Aggregate value of taxable personal property (exclusive of steam railroads, electric railways and telegraph lines) as equalized by county boards	Aggregate value of real property (exclusive of steam railroads, electric railways and telegraph lines) as equalized by county boards	Aggregate value of real and personal property (exclusive of steam railroads, electric railways and telegraph lines) by county boards	Assessed ratio to actual value (Pct.)	Actual value of real and personal property (exclusive of steam railroads, electric railways and telegraph lines)
1	Adams	\$2,432,955	\$13,206,223	\$15,638,608	42.0	\$87,235,257
2	Asotin	791,554	3,691,140	4,482,694	44.8	10,006,013
3	Benton	1,460,080	6,400,285	7,860,265	43.0	18,279,756
4	Chelan	1,966,211	10,985,972	12,951,183	40.9	31,665,494
5	Clallam	1,049,413	12,423,668	13,473,081	50.0	26,956,162
6	Clarke	2,066,039	11,440,600	13,476,719	36.0	37,435,831
7	Columbia	1,290,629	6,432,410	7,723,238	38.0	20,350,693
8	Cowlitz	768,373	6,953,740	7,747,113	30.0	25,823,710
9	Douglas	1,995,297	9,061,982	11,057,279	38.4	28,794,841
10	Ferry	579,188	2,006,412	2,585,600	45.5	5,687,033
11	Franklin	1,348,731	4,596,109	5,940,840	43.5	13,586,839
12	Garfield	949,591	3,616,795	4,566,389	33.0	13,980,048
13	Grant	2,098,369	8,421,510	10,509,879	39.5	26,607,239
14	Grays Harbor	5,630,300	23,890,744	29,520,944	38.0	77,696,695
15	Island	835,190	1,800,738	2,635,928	44.0	4,597,739
16	Jefferson	818,681	6,294,826	7,113,507	44.0	16,167,130
17	King	41,303,039	209,618,432	250,921,471	44.0	545,671,987
18	Knap	926,005	6,709,013	7,635,018	44.0	17,430,405
19	Kittitas	2,589,320	10,382,037	12,971,357	38.5	33,639,885
20	Klickitat	2,136,376	17,715,060	19,851,436	40.0	24,623,565
21	Lewis	2,774,356	15,917,780	18,692,136	36.3	51,862,404
22	Lincoln	4,451,212	18,172,831	22,624,043	41.3	54,862,404
23	Lyon	419,496	4,645,683	5,065,184	38.3	13,226,023
24	Okanogan	2,127,566	5,575,250	7,702,815	40.2	19,161,306
25	Pacific	1,846,235	11,021,256	12,867,491	39.0	32,998,665
26	Pend Oreille	931,136	3,554,042	4,485,227	40.9	11,047,882
27	Pierce	17,296,432	63,848,665	80,965,127	46.5	173,408,875
28	San Juan	389,136	1,176,440	1,575,575	39.6	3,978,725
29	Shagit	2,754,145	12,706,735	15,460,880	30.2	51,388,709
30	Shamania	572,921	3,233,065	3,805,986	40.0	9,664,040
31	Snohomish	6,310,465	25,659,185	31,969,650	40.4	79,132,822
32	Spokane	17,377,525	76,989,327	94,316,852	39.3	239,991,990
33	Stevens	1,870,895	6,906,004	8,776,899	32.5	27,012,132
34	Thurston	2,373,971	8,790,689	11,063,760	40.0	27,659,400
35	Wahkiakum	899,994	1,196,360	1,896,254	35.0	4,890,297
36	Walla Walla	4,398,490	21,679,705	26,078,195	41.0	63,605,261
37	Whitcom	4,789,229	17,012,680	21,801,909	35.4	61,867,314
38	Whitman	9,725,758	29,817,170	39,542,928	38.7	98,134,168
39	Yakima	7,478,400	25,469,850	32,948,250	40.3	71,266,638
Totals		\$157,802,116	\$719,005,547	\$875,807,713	41.09	\$2,105,590,814

Schedule "D"—Concluded.

ACTUAL VALUES AS DETERMINED BY
STATE BOARD OF EQUALIZATION

COUNTIES

	Steam railroads	Electric railways	Telegraph lines	Total steam rail- roads, electric railways and telegraph lines	Aggregate actual value of real and personal property, including steam railroads, electric railways and telegraph lines	Aggregate value of all taxable property, real and personal, in- cluding steam railroads, electric railways and telegraph lines, as equalized by state board of equalization
1 Adams	\$22,390,319	\$20,000	\$43,080	\$22,312,345	\$50,547,605	\$24,757,771
2 Anatin				20,000	10,026,013	4,168,927
3 Benton	13,804,350		15,744	13,820,103	32,009,859	13,346,510
4 Cheban	8,800,549		5,365	8,805,915	40,471,389	16,327,244
5 Chellam	9,900,607		6,430	1,003,087	27,959,109	11,624,909
6 Clarke	6,137,680	118,002		6,255,682	43,736,023	13,180,456
7 Columbia	3,813,312	14,035		3,827,347	24,179,923	10,038,500
8 Cowditz	5,982,484	36,884		6,019,318	31,533,025	13,243,885
9 Douglas	3,427,322	1,264		3,428,586	32,223,474	13,367,910
10 Ferry	2,237,441			2,237,441	7,924,474	3,234,847
11 Franklin	13,806,265		26,451	13,832,716	27,418,155	11,400,118
12 Garfield	586,191		2,436	588,627	14,578,125	6,061,309
13 Grant	12,866,646		15,944	12,882,590	39,019,879	10,223,780
14 Grays Harbor	5,761,968	1,060,000	6,868	6,818,261	84,504,966	36,135,667
15 Island					4,597,789	1,911,674
16 Jefferson	497,587		6,808	504,345	16,571,475	6,981,685
17 King	36,120,248	20,058,734	97,613	56,271,595	601,838,532	250,251,820
18 Kitsap	72,680		3,972	76,652	17,497,047	7,274,342
19 Kittitas	17,022,617		42,677	17,065,294	50,705,132	21,082,258
20 Klickitat	10,869,568			10,869,568	35,493,143	14,729,458
21 Lewis	7,661,718	208,068	17,790	7,886,571	60,843,741	25,239,789
22 Lincoln	12,114,324		19,569	12,133,913	65,936,317	27,851,647
23 Mason	435,980			435,980	13,682,000	5,686,721
24 Okanogan	3,984,085			3,984,085	23,145,391	9,623,417
25 Pacific	2,371,305	87,000	2,695	2,461,001	35,459,756	14,743,469
26 Pend Oreille	5,692,084		1,181	5,700,265	14,747,627	6,131,785
27 Pierce	16,132,716	4,589,410	59,292	20,888,418	194,247,238	80,764,361
28 San Juan					8,978,725	1,654,279
29 Shast	7,775,420	564,651	23,910	8,363,981	60,147,680	25,008,275
30 Skamania	4,301,772			4,301,772	13,985,812	5,765,143
31 Snohomish	18,642,667	2,334,275	40,407	21,017,319	100,850,541	41,723,882
32 Spokane	23,623,913	7,943,331	76,770	30,643,017	276,634,997	115,019,614
33 Stevens	4,232,511			4,232,511	31,294,493	13,011,743
34 Thurston	7,400,780	392,000	30,691	7,793,471	35,922,321	14,943,505
35 Walla Walla					4,369,297	1,824,367
36 Whitman	14,423,036	325,000	35,690	14,783,726	78,389,626	32,062,928
37 Yakima	6,600,668	2,127,980	16,971	10,746,544	72,332,858	30,074,636
38	23,612,554	3,102,919	90,922	26,815,395	190,130,548	49,948,014
39	20,946,157	465,500	20,021	21,431,678	82,577,561	34,384,180
Totals	\$840,802,230	\$43,718,875	\$767,332	\$884,988,437	\$2,491,547,951	\$1,085,988,644

SCHEDULE "E"—Abstract Showing Amount of Tax for each of the following funds: State General, State School, Military, Capitol Building Construction, Permanent Highway, Public Highway, University of Washington, Washington State College, Bellingham, Cheney and Ellensburg Normal Schools, to be raised by each county, for the year 1918.

COUNTIES		Amount of state general tax to be paid by each county	Amount of state school tax to be paid by each county	Amount of tax for military fund to be paid by each county	Amount of tax for capitol building construction fund to be paid by each county	HIGHWAY FUNDS	
						Amount of tax for permanent highway fund to be paid by each county	Amount of tax for public highway fund to be paid by each county
		Rate of levy 1.80 mills	Rate of levy 2.24 mills	Rate of levy 0.30 mills	Rate of levy 0.50 mills	Rate of levy 1.50 mills	Rate of levy 1.00 mills
1	Adams	\$44,566	\$55,460	\$7,428	\$12,879	\$67,138	\$24,739
2	Anotin	7,506	9,388	1,251	2,084	6,258	4,189
3	Benton	24,024	29,896	4,004	6,673	26,020	13,846
4	Chelan	36,289	37,698	5,048	8,414	25,241	16,827
5	Clallam	20,925	26,040	3,487	5,813	17,487	11,025
6	Clarke	32,725	40,724	5,454	9,060	27,271	18,180
7	Columbia	18,096	22,580	3,016	5,027	16,080	10,054
8	Cowlitz	23,639	29,666	3,973	6,622	19,896	13,244
9	Douglas	24,116	30,011	4,019	6,609	20,007	13,336
10	Ferry	5,931	7,381	988	1,647	4,942	3,236
11	Franklin	20,520	25,587	3,420	5,706	17,109	11,400
12	Garfield	10,911	13,577	1,818	3,081	9,092	6,061
13	Grant	29,202	36,341	4,867	8,112	24,336	16,224
14	Grays Harbor	63,244	78,708	10,541	17,567	58,708	35,130
15	Island	3,441	4,282	574	955	2,867	1,912
16	Jefferson	12,477	15,527	2,080	3,466	10,397	6,982
17	King	450,463	560,564	75,076	125,126	375,378	250,232
18	Kitsap	13,096	16,290	2,182	3,687	10,912	7,276
19	Kittitas	37,948	47,224	6,325	10,541	31,622	21,082
20	Klickitat	26,567	33,061	4,428	7,390	22,139	14,789
21	Lewis	45,540	56,672	7,590	12,660	37,949	25,299
22	Lincoln	50,133	62,368	8,355	13,926	41,776	27,882
23	Mason	10,240	12,743	1,707	2,844	8,598	5,699
24	Okanogan	17,322	21,556	2,867	4,812	14,439	9,624
25	Pacific	26,538	33,025	4,423	7,372	22,115	14,743
26	Pend Oreille	11,037	13,736	1,840	3,098	9,198	6,132
27	Pierce	145,376	180,912	24,229	40,332	121,147	80,764
28	San Juan	2,978	3,708	496	827	2,482	1,654
29	Skagit	45,015	56,019	7,502	12,504	37,513	25,006
30	Skamania	10,377	12,914	1,730	2,838	8,646	5,765
31	Snohomish	75,108	96,461	12,517	20,862	62,686	41,724
32	Spokane	207,035	257,644	34,500	57,510	173,229	115,020
33	Stevens	23,421	29,146	3,904	6,508	19,513	13,012
34	Thurston	26,906	33,485	4,485	7,474	22,422	14,946
35	Wahkiakum	3,255	4,068	548	913	2,738	1,825
36	Walla Walla	58,697	73,008	9,778	16,299	48,899	32,698
37	Whatecom	54,134	67,367	9,022	15,087	45,112	30,075
38	Whitman	59,305	111,384	14,984	24,974	74,922	49,948
39	Yakima	61,802	76,908	10,300	17,167	51,501	34,334
Totals		\$1,864,690	\$2,320,508	\$310,782	\$517,969	\$1,658,908	\$1,085,969

Schedule "E"—Concluded.

COUNTIES		STATE INSTITUTIONS OF HIGHER EDUCATION					Total amount of tax, including state general, state school, military, capitol building construction, permanent highway, public highway, University, State College, Bellingham, Cheney and Ellensburg Normal Schools, to be paid by each county
		Amount of tax for University fund to be paid by each county	Amount of tax for Washington State College fund to be paid by each county	Amount of tax for Bellingham Normal School fund to be paid by each county	Amount of tax for Cheney Normal School fund to be paid by each county	Amount of tax for Ellensburg Normal School fund to be paid by each county	
		Rate of levy 0.74 mills	Rate of levy 0.46 mills	Rate of levy 0.152 mills	Rate of levy 0.13 mills	Rate of levy 0.108 mills	
1	Adams	\$18,821	\$11,141	\$3,768	\$3,219	\$2,674	\$220,848
2	Asotin	3,085	1,876	634	541	450	37,194
3	Benton	9,877	6,008	2,029	1,735	1,441	119,051
4	Chelan	12,452	7,572	2,568	2,189	1,817	150,099
5	Challam	8,602	5,231	1,767	1,511	1,256	108,694
6	Clarke	13,454	8,181	2,763	2,364	1,964	162,170
7	Columbia	7,440	4,524	1,523	1,307	1,086	89,678
8	Cowlitz	9,800	5,960	2,013	1,722	1,430	118,185
9	Douglas	9,914	6,029	2,037	1,742	1,447	119,509
10	Ferry	2,438	1,488	501	428	356	29,390
11	Franklin	8,436	5,180	1,733	1,482	1,231	101,689
12	Garfield	4,485	2,728	921	788	656	54,067
13	Grant	12,008	7,301	2,466	2,109	1,752	144,716
14	Grays Harbor	28,000	15,611	5,341	4,568	3,795	313,409
15	Island	1,415	890	291	248	207	17,062
16	Jefferson	5,129	3,119	1,064	901	749	61,851
17	King	186,189	112,613	39,038	32,533	27,027	2,232,246
18	Kitsap	6,883	2,274	1,106	946	786	64,392
19	Kittitas	15,601	9,487	3,205	2,741	2,277	188,054
20	Klickitat	10,922	6,642	2,243	1,919	1,594	131,654
21	Lewis	18,722	11,395	3,846	3,299	2,732	225,674
22	Lincoln	20,610	12,583	4,233	3,621	3,008	248,437
23	Mason	4,209	2,560	864	740	614	50,743
24	Okanogan	7,122	4,330	1,463	1,251	1,069	86,841
25	Pacific	10,911	6,685	2,241	1,917	1,592	131,512
26	Pend Oreille	4,589	2,759	932	797	662	54,696
27	Pierce	50,766	30,344	12,276	10,499	8,723	720,418
28	San Juan	1,224	744	251	215	179	14,766
29	Skagit	18,506	11,254	3,801	3,251	2,701	223,074
30	Skamania	4,266	2,594	876	749	623	51,425
31	Snohomish	30,876	18,776	6,342	5,424	4,506	372,177
32	Spokane	85,115	51,759	17,433	14,962	12,422	1,026,975
33	Stevens	9,629	5,855	1,978	1,691	1,405	116,005
34	Thurston	11,082	6,727	2,272	1,943	1,614	133,341
35	Wahkiakum	1,350	821	277	237	197	16,279
36	Walla Walla	24,119	14,667	4,964	4,237	3,520	290,729
37	Whatecom	22,259	13,534	4,572	3,910	3,245	266,266
38	Whitman	36,362	22,477	7,592	6,468	5,394	443,580
39	Yakima	26,407	15,450	5,219	4,464	3,708	306,261
Totals.....		\$766,595	\$466,172	\$157,408	\$134,672	\$111,881	\$9,240,573



STATE OF WASHINGTON

ANNUAL REPORTS

Washington State Forester

For the Years Ending November 30, 1917,
and November 30, 1918



TO THE

State Board of Forest Commissioners

W. W. EMERY, Chairman, Napavine

C. V. SAVIDGE, Land Commissioner, Olympia

FRANK B. COLE, Tacoma PATRICK McCOY, Seattle

E. G. ENGLISH, Mt. Vernon

F. E. PAPE, Forester and Secretary, Olympia

OLYMPIA, WASH.

FRANK M. LAMBORN  PUBLIC PRINTER

1919

STATEMENT OF APPROPRIATIONS.

DISTRIBUTION	TABLE NO. 1	TABLE NO. 2
	Dec. 1, 1916, to Nov. 30, 1917	Dec. 1, 1917, to Nov. 30, 1918
Total expended 1915 to 1917 appropriations.....	\$4,273 46	
Total expended 1917 to 1919 appropriations.....	38,638 01	\$27,831 94
Total expenditures each season.....	\$42,911 47	\$27,831 94
Reverted to treasury 1915 to 1917 appropriation, April 1. \$8,822 25		
Balance in appropriation December 1.....	\$30,361 99	\$2,430 05
APPROPRIATION 1917-1919		
Salary State Forester.....	\$4,000 00	
Salary assistant.....	3,000 00	
Salary clerks.....	1,200 00	
Supplies, material and service.....	2,200 00	
Furniture and equipment.....	807 50	
Field operations.....	58,292 50	
Total.....	\$69,000 00	
Expended two seasons as above.....	\$66,509 95	
Balance December 1, 1918.....	\$2,430 05	
PATROL LAW FUNDS 1917-1918		
	Received	Disbursed
Fire fighting expense recovered.....	\$1,894 10	
Patrol assessments collected.....	10,415 58	
Fire fighting recoveries returned to treasury.....		\$538 70
Fire fighting recoveries paid to fire fighters.....		555 40
Patrol assessments to Washington Forest Fire Association for protection expended 1917 on agreement.....		10,000 00
Totals.....	\$11,809 68	\$11,894 10
Balance unexpended December 1.....		\$415 58

TABLE NO. 3.

STATEMENT OF PATROL ASSESSMENTS AND COLLECTIONS THEREFROM TO
NOVEMBER 30th, 1918.

COUNTIES	1917 Assessment	Received from County Treasurer	Other Credits	Balance Unpaid	1918 Assessment Uncollected
Ollam.....	\$1,736 42	\$1,888 12	.....	\$353 80	\$2,804 19
Clarke.....	189 28	61 29	.....	77 99	206 73
Cowlitz.....	276 70	191 48	.....	86 22	419 84
Grays Harbor.....	1,773 41	1,686 74	\$3 20	83 47	2,526 33
Jefferson.....	746 74	641 75	.....	104 99	2,020 60
King.....	698 04	575 21	.....	122 83	1,461 24
Kitsap.....	42 89	24 53	.....	17 86	63 57
Island.....	.....	.....	.....	.....	54 09
Lewis.....	748 40	698 08	10 96	51 36	1,388 40
Mason.....	644 64	570 53	12 40	61 71	964 72
Pacific.....	1,375 57	1,062 51	.....	323 06	2,142 90
Pierce.....	438 90	410 27	.....	28 63	787 96
Pend Oreille.....	.....	.....	.....	.....	3,964 50
Skagit.....	1,021 44	1,347 24	.....	274 20	3,615 33
Skamania.....	.....	.....	.....	.....	1,553 64
Snohomish.....	313 26	249 12	.....	64 14	669 60
Thurston.....	892 98	566 75	33 69	289 42	1,156 96
Wahkiakum.....	438 72	325 29	3 98	109 45	790 32
Whatcom.....	835 12	641 83	4 96	188 83	1,163 73
Totals.....	\$12,721 89	\$10,418 74	\$72 19	\$2,235 96	\$27,764 17

The assessment for 1917 was 2 cents per acre and for 1918 it was 3 cents per acre, except in Pend Oreille county, where it was 3½ cents per acre.

TABLE NO. 4.

STATEMENT SHOWING THE AMOUNT OF STATE FUNDS EXPENDED IN EACH COUNTY FOR FIRE FIGHTING AND PROTECTION, AND THE AMOUNT DUE THE STATE FROM THE SEVERAL COUNTIES; ALSO THE AMOUNT EXPENDED FOR PATROL FROM FEDERAL WEEKS LAW FUNDS.

COUNTIES	SEASON OF 1917			SEASON OF 1918		
	State Funds	Due from Counties	Weeks Law Patrol	State Funds	Due from Counties	Weeks Law Patrol
Cllallam.....	\$1,762 51	\$587 50	\$406 00	\$1,986 77	\$645 59	\$633 50
Clarke.....	831 27	277 09	348 00	891 30	297 10	250 50
Cowlitz.....	1,257 20	419 07	699 00	1,134 41	378 14	499 50
Chelan.....	43 75	14 58	.....	.....	.....	.....
Ferry.....	637 70	212 57	.....	656 85	218 95	.....
Grays Harbor.....	1,164 48	388 16	543 00	655 00	218 33	598 30
Island.....	450 95	150 32	.....	531 47	177 16	.....
Jefferson.....	1,192 55	397 51	307 00	1,031 49	343 83	308 00
King.....	3,014 30	1,004 77	1,162 50	1,851 08	617 01	1,340 50
Kitsap.....	456 45	152 15	.....	340 00	113 34	.....
Klickitat.....	591 50	197 17	.....	696 35	232 78	.....
Kittitas.....	.....	.....	.....	52 10	17 37	.....
Lewis.....	2,780 90	926 97	1,003 50	1,151 13	383 71	845 50
Mason.....	677 44	225 81	169 50	929 65	276 55	304 00
Pacific.....	1,078 78	359 59	369 00	554 08	184 69	556 50
Pierce.....	2,605 61	868 54	624 00	1,435 72	478 57	511 00
Pend Oreille.....	3,667 65	1,222 55	279 00	757 10	252 37	483 00
Skagit.....	2,161 93	720 64	660 00	955 55	318 52	637 50
Skamania.....	1,014 60	338 20	175 50	574 65	191 55	332 50
Snohomish.....	2,767 26	922 42	672 00	1,882 86	460 95	732 50
Stevens.....	2,002 32	667 44	342 00	1,700 58	566 86	493 50
Spokane.....	758 53	252 84	.....	705 45	235 15	.....
Thurston.....	952 01	317 34	184 50	491 58	163 66	105 00
Wahkiakum.....	470 70	156 90	.....	521 05	173 69	.....
Whatcom.....	965 95	321 98	517 50	1,201 08	400 36	325 50
Totals.....	\$33,306 34	\$11,102 11	\$8,494 00	\$22,039 25	\$7,346 42	\$9,587 50

NOTE—One-third of the expenditures from State funds is payable into the State treasury by the county in which the expense was incurred. (See Section 1, Chapter 125, Laws of 1911).

FIRE PATROL LAW.

This law was enacted by the Fifteenth Legislature as Chapter 105, Laws of 1917. It provides that every owner of timber land must furnish patrol and protection satisfactory to the State Board of Forest Commissioners. Failing in this duty, the State Forester, under direction of the State Board of Forest Commissioners, is authorized to provide protection at a cost not exceeding 5 cents per acre and to assess the land therefor.

Under these provisions arrangements were made with associations and private patrol districts to protect all timber lands in their respective districts, regardless of ownership.

Assessments are made on all non-contributing timber land, based on the average cost of patrol and protection as determined at the close of the season. Before this law was enacted there were large areas of timber lands that were necessarily afforded protection from State funds and funds of organizations without any cost to owners, while now the law requires all owners of timber land to contribute on an equitable basis.

Further, the law makes these assessments available as they are collected, thus providing a means of meeting extraordinary expenses during critical fire seasons such as 1917 and 1918 have been. The funds are derived, not from the State, but from timber owners themselves, thus making them strictly forest protective funds.

Agreeable to the provisions of Section 2 of the act, agreements were entered into between the State Board of Forest Commissioners and the Washington Forest Fire Association for western Washington, and the Eastern Washington Timber Protective Association for Pend Oreille county, to provide necessary patrol and protection in co-operation with the State. Under these agreements they paid all the fire fighting cost for the season of 1918, in addition to contributing large sums toward maintaining State employees during the closing weeks.

Under the provisions of Section 5, an economic saving was effected by joint selection of district wardens in lieu of supervising county wardens and association inspectors. This arrangement placed both State and association employees under one supervising district warden, each party contributing to their salary and expense. The plan has worked out very satisfactorily and has improved co-operation and increased the efficiency of the field forces.

In trying out this provision of the law, seven district wardens were selected and appointed for the season of 1917. The experiment proved so economic and satisfactory that the program was enlarged upon for the season of 1918, when fifteen district wardens were appointed. Like arrangements were made in Pend Oreille county with the Eastern Washington Timber Protective Association.

This plan of co-operation was further extended this season by the association participating in the selection of fourteen Weeks Law patrolmen, who were equipped with automobiles and given enlarged districts. This co-operation was approved by the supervisor of federal Weeks Law service.

Section 3, which defines the responsibility for controlling and extinguishing fires, has greatly assisted us in better co-operation and also in the ad-

justment of fire fighting costs. Under its provisions this department has recovered \$1,394.10, of which \$538.70 was first paid out of appropriation, and upon recovery was returned to treasury. The balance, \$855.40, was disbursed direct to the party or parties to whom fire fighting costs were due. The association has also recovered fire expense by adjustment direct with the parties responsible and on whose behalf the work was done to the amount of \$2,131.26.

The enforcement of the provisions of Section 4 has been the means of disposing of large areas of inflammable forest debris. Our field force has been instructed to assist in this work and in some cases has been employed by the persons responsible for the fire hazard, but in no case has there been a refusal to comply with the law. Our field force is instructed to report all dangerous slashings remaining undisposed of at the end of the season, and later notices are addressed to owners requesting that these slashings, clearings, etc., be burned at first favorable opportunity in the spring and before it gets so dry that ground fires will run in green timber.

The patrol assessments and collections therefrom are shown in detail. (See Table 3, page 7; also see last items of Table 1 and 2 for summary of receipts and disbursements and balance due under this law). Receipts and disbursements are reported to the State Board of Forestry at each meeting. They are also accounted for by filing duplicate receipts and vouchers with the State Auditor in the same manner as required in disbursing from regular appropriations.

The right of the State Board of Forest Commissioners and State Forester to receive and disburse the collections under this law was questioned early in 1918. The matter was taken to the Attorney General and finally brought before the supreme court. A decision was arrived at in August permitting use of these funds.

TABLE NO. 5.
1917.
1917 FOREST FIRES, OUTSIDE OF NATIONAL FORESTS, REPORTED BY STATE AND ASSOCIATION EMPLOYEES.

COUNTIES	AREA BURNED					STANDING MERCHANT-TIMBER		DAMAGE AND LOSS TO PROPERTY						
	No. fires	Merch. timber	Second growth	Cut-over land	Brush land	Old burn	Total area	M. Ft., B. M. killed	M. Ft., B. M. destroyed	Merchant-able Timber	Logs	Logging Equipment	To Settlers	Total Damage
Challam.....	15	1	846	1,001	308	207	2,363	.....	50	\$100 00	.....	.....	\$1,000 00	\$1,100 00
Clarke.....	22	5	51	872	50	15,891	16,869	.....	.....	.....	\$1,050 00	.....	810 00	1,360 00
Cowlitz.....	43	965	312	5,750	88	9,175	16,290	81	.....	162 00	3,838 50	\$6,770 00	1,275 00	12,045 50
Ferry (no report).....	107	1,0783	2	8,612	173	7,4943	17,390	89	1,165	2,330 30	4,121 50	865 00	4,000 00	11,256 80
Grays Harbor.....	6	.....	20	6	40	.....	66	.....	.....	.....	.....	.....	.....	.....
Island.....	28	131	173	3,530	605	1,165	5,604	20	152	304 00	500 00	50 00	50 00	904 00
Jefferson.....	159	115	231	5,738	1,661	7,768	8,511	190	240	480 00	5,978 00	2,500 00	9,180 00	18,138 00
King.....	32	.....	.....	415	161	120	696	.....	.....	.....	700 00	.....	.....	700 00
Kitsap.....	3	1,390	.....	240	160	.....	1,760	75	150	250 00	.....	.....	.....	250 00
Klickitat.....	64	2,747	86	2,867	133	1,160	7,113	130,216	8,670	17,340 00	4,400 00	4,780 00	300 00	26,910 00
Lewis.....	52	3,586	1,700	12,524	233	8,483	26,526	610	850	1,700 00	1,067 50	200 00	2,332 00	5,296 50
Mason.....	13	14	.....	6,970	.....	25	7,012	450	.....	900 00	460 00	4,150 00	1,510 00	7,020 00
Pacific.....	25	10,854	5	8,072	3,380	5,002	27,912	18,576	5,115	15,887 00	23,000 50	.....	3,500 00	42,387 50
Pend Oreille.....	110	941	225	15,983	886	2,251	20,296	964	820	1,640 00	250 00	3,875 00	250 00	6,015 00
Pierce.....	66	403	27	5,963	92	3,175	9,660	60	206	413 50	7,560 00	45 00	4,250 00	12,287 50
Skagit.....	17	1,480	462	849	1,745	2,807	7,343	2,000	201	402 00	1,750 00	3,250 00	5,000 00	5,402 00
Skamania.....	75	383	.....	4,528	84	2,348	7,343	2,000	112	224 00	11,020 00	88,600 00	1,250 00	104,904 00
Snohomish.....	7	1,720	.....	6,400	490	8,610	1,000	750	.....	1,500 00	560 00	.....	2,475 00	3,310 00
Spokane.....	46	65	620	2,670	1,320	2,808	7,483	1,000	700	1,400 00	210 00	2,600 00	250 00	4,085 00
Stevens.....	23	281	30	4,515	53	145	5,024	1,027	1,700	3,400 00	1,400 00	.....	.....	7,650 00
Thurston.....	4	.....	.....	1,802	100	580	1,902	.....	.....	3,000 00	4,000 00	5,000 00	300 00	13,200 00
Wahkiakum.....	17	433	15	1,645	212	.....	2,885	2,000	1,500	100 00	.....	.....	.....	100 00
Whatcom.....	1	100	.....	200	.....	.....	300	40	50	.....	.....	.....	.....	.....
•Chelan.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	965	26,6623	4,807	101,172	11,974	64,152	208,768	159,857	22,962	\$51,531 80	\$72,856 00	\$130,125 00	\$37,202 00	\$291,804 80
In national forests	554	.....	.....	.....	.....	.....	70,814	33,812	.....	\$29,115 00	Other damage.....	.....	\$142,766 00	\$171,910 00

The 965 forest fires were classified as follows: Unknown, 218; campers, 183; lumbering, 147; slash burning, 124; miscellaneous, 122; railroad, 93; incendiary, 74, and lightning, 4.

Five hundred and fifty-four fires in national forests are classified thus: Railroads, 89; lightning, 34; incendiary, 17; brush burning, 39; campers, 218; lumbering, 19; unknown, 96, and miscellaneous, 22.

* Report from Chelan county by United States forest service.

TABLE NO. 6.
1918.
FOREST FIRES, OUTSIDE OF NATIONAL FORESTS, REPORTED BY STATE AND ASSOCIATION EMPLOYEES.

COUNTIES	AREA BURNED						MERCHANT- ABLE TIMBER	DAMAGE AND LOSS TO PROPERTY						
	No. fires	Merch. timber	Second growth	Brush land	Out- over land	Old burn		Total area	Timber	Logs	Lumbering Equipment	Settlers and Others	Total Loss and Damage	
Clallam.....	22	1,202	124	137	2,444	330	4,237	2,108	562	\$1,751 00	\$4,875 00	\$4,300 00	\$20 00	\$10,946 00
Clarke.....	30	62	246	682	3,966	2,432	7,357	450	.....	125 00	250 00	1,000 00	1,000 00	2,435 00
Cowlitz.....	52	292	200	834	8,616	3,218	12,700	460	20	152 00	1,825 00	10,700 00	225 00	12,902 50
Ferry.....	13	56	10	149	21	236	326	10	5	12 50	.....	.....	.....	112 50
Grays Harbor.....	80	1,536	18	12,775	17,743	32,073	47,749	1,233	1,233	14,403 00	6,715 00	79,060 00	10,870 00	110,785 00
Island.....	11	1	441	2	444	2	444	40	40	215 00	6,600 00	7 00	12 50	19 50
Jefferson.....	24	520	324	1,037	2,690	1,665	6,256	540	40	215 00	6,600 00	38,000 00	800 00	43,615 00
King.....	133	470	403	802	9,152	889	11,716	4,298	795	2,657 00	5,225 00	13,400 00	7,150 00	23,433 00
Kitsap.....	14	20	150	580	443	70	1,063	.....	.....	.....	5,500 00	100 00	120 00	5,720 00
Klickitat.....	10	150	210	180	580	1,120	1,120	.....	.....	.....	.....	100 00	100 00	100 00
Lewis.....	74	2,560	128	321	3,115	1,543	9,671	82,375	3,110	26,814 00	5,100 00	55,435 00	24,900 00	122,239 00
Mason.....	114	1,321	290	894	9,946	4,133	16,574	1,983	108	639 00	5,900 00	24,900 00	825 00	32,234 00
Pacific.....	30	387	5	876	8,763	2,900	12,055	1,695	4,870	9,164 00	2,500 00	15,100 00	50 00	26,814 00
Pend Oreille.....	45	1,890	312	2,290	3,223	337	8,492	739	51	295 00	3,001 00	11,500 00	12,050 00	26,887 00
Pierce.....	53	365	450	2,039	8,763	1,225	12,841	4,450	646	2,404 00	1,075 00	4,823 00	1,455 00	9,757 00
Skagit.....	44	357	467	10,057	2,505	13,387	1,362	850	.....	2,038 00	5,060 00	15,350 00	100 00	23,538 00
Skamania.....	16	.....	30	295	798	21,295	22,336	2,894	.....	883 00	4,525 00	400 00	6,000 00	6,400 00
Snohomish.....	96	573	23	28	3,892	8,310	12,835	154	11	60 00	295 00	.....	5,162 00	21,170 00
Spokane.....	15	860	800	4,470	2,590	1,150	9,900	1,164	.....	.....	295 00	.....	1,300 00	1,645 00
Stevens.....	18	200	.....	205	170	160	735	.....	.....	70 00	.....	800 00	4,825 00	5,645 00
Thurston.....	36	963	35	2,915	3,742	16	4,755	525	455	925 00	1,800 00	1,800 00	50 00	4,875 00
Whatcom.....	22	810	60	1,024	2,915	1,091	5,500	1,200	1,410	3,120 00	2,800 00	6,300 00	2,000 00	13,720 00
Wahkiakum.....	8	50	.....	.....	5,245	1,000	6,236	500	100	825 00	3,750 00	25,500 00	.....	29,575 00
Totals.....	954	14,607	8,630	15,842	106,273	72,514	312,866	153,142	13,816	\$66,034 00	\$95,246 00	\$317,135 00	\$68,864 50	\$538,290 50
In national forests.....	563	.....	.....	.....	.....	.....	111,544	417,667	.....	\$322,399 00	Other losses.....	.....	\$51,667 00	\$373,966 00

The 954 fires were classified as follows: Caused by donkey engines, 107; logging locomotives, 78; logging slash, 53; railroad locomotives, 48; campers, 125; hunters and fishermen, 38; cigars and cigarettes, 30; carelessness with matches, 148; land clearing, 74; berry pickers, 23; incendiary, 35; clearing right-of-way, 15; lightning, 79; smoldering, 30; miscellaneous, 60, and bee hunters, 11.

Classification of causes of national forest fires: Railroads, 94; lightning, 197; incendiary, 3; brush burning, 26; campers, 163; lumbering, 30; unknown, 40, and miscellaneous, 10. Of the total national forest fires 394 are reported within national forest boundaries and 169 outside or having entered from outside.

TABLE NO. 7.
1917.

PERMITS ISSUED BY STATE, ASSOCIATION AND UNITED STATES FOREST SERVICE; CLASSIFICATION AND ACREAGE OF LAND BURNED UNDER PERMIT; IMPROVEMENTS FOR FOREST PROTECTION BY STATE AND ASSOCIATION EMPLOYEES; LOGGING OPERATIONS; ARRESTS AND FINES.

COUNTIES	BURNING PERMITS				IMPROVEMENTS FOR FOREST PROTECTION						ARRESTS		Number logging operations
	Number	Agricultural area, acres	For forest protection, acres	Wagon road right-of-way, miles	Railroad right-of-way, miles	Fire line, miles	New trail, miles	Old trail, miles	Number camp sites	Number snags felled	Number	Fine amount	
Challam.....	209	920	608	4	8	3¼	.....	14	4	.....	1	\$27 50	22
Clarke.....	176	920	217	.....	15	5½	.....	3	1	300	.....	.....	16
Cowlitz.....	257	1,115	1,470	15	14	5½	5	10	4	210	1	8 50	40
Ferry (partial).....	38	240	186	.....	5	.....	.....	.....	.....	.....	.....	.....	.....
Grays Harbor.....	642	8,178	1,975	39	30	9¼	.....	8	1	260	.....	.....	62
Island.....	40	264	45	9	.....	¾	.....	.....	.....	.....	.....	.....	4
Jefferson.....	86	404	115	5½	3	¾	.....	.....	.....	86	.....	.....	10
King.....	606	2,579	2,871	33	16	3½	.....	.....	.....	.....	.....	.....	64
Kitsap.....	124	356	40	9	3	.....	.....	.....	.....	100	.....	.....	14
Klickitat.....	18	128	880	.....	.....	10	.....	.....	.....	.....	.....	.....	.....
Lewis.....	1,410	7,419	2,521	72¼	10	59¼	.....	.....	5	1,700	1	25 00	47
Mason.....	226	583	145	40½	1	6	.....	.....	.....	75	.....	.....	39
Pacific.....	130	720	553	17	.....	11¼	.....	8	2	.....	.....	.....	35
Pend Oreille.....	198	1,679	1,910	18¼	13	33	1	.....	.....	330	3	81 00	14
Pierce.....	580	2,545	1,883	29	12	4	¾	22	2	75	.....	.....	41
Skagit.....	512	3,471	5,734	12	4	4	1	30	11	1,500	.....	.....	45
Skamania.....	67	505	160	40½	.....	7¾	1	8¾	.....	443	.....	.....	17
Snohomish.....	1,386	5,398	2,254	18	25	17	.....	4	.....	729	4	36 75	65
Spokane.....	273	7,583	13,428	17	.....	1	.....	.....	.....	40	.....	.....	1
Stevens.....	242	1,628	2,640	10	25	8	.....	10	.....	500	1	50 00	15
Thurston.....	478	2,048	5,021	33	.....	9¼	.....	21¼	.....	37	.....	.....	18
Wahkiakum.....	64	214	.....	9	.....	1¾	.....	.....	.....	275	.....	.....	20
Whatcom.....	511	2,664	1,471	41	2	1¾	.....	.....	.....	200	2	55 00	15
Okanogan.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Chelan.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	8,273	46,619	46,201	472	169	322¾	9	139¼	30	6,860	14	\$311 25	604

TABLE NO. 8.

1918.

PERMITS ISSUED BY STATE, ASSOCIATION AND UNITED STATES FOREST SERVICE; CLASSIFICATION AND ACREAGE OF LAND BURNED UNDER PERMIT; IMPROVEMENTS FOR FOREST PROTECTION BY STATE AND ASSOCIATION EMPLOYEES; LOGGING OPERATIONS; ARRESTS AND FINES.

COUNTIES	BURNING PERMITS			PROTECTION AND IMPROVEMENT WORK				ARRESTS	
	No. Permits Issued	Acres	Right-of-way, miles	Fire line, rods	Imp. trail, rods	Camp sites	Snags felled	No.	Fines
Ollam.....	108	691	.....	180	900	.....	10	.....	.....
Clarke.....	114	1,741	7	500	960	.....	75	.....	.....
Chelan.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Cowlitz.....	218	2,222	1	1,968	.....	.....	65	.....	.....
Ferry.....	25	716	.....	2,000	240	3	70	1	.....
Jefferson.....	69	293	2	1,900	.....	.....	85	.....	.....
Grays Harbor.....	502	1,516	3	4,480	6,080	.....	380	.....	.....
Island.....	17	352	3	40	.....	.....	.....	.....	.....
Kitsap.....	109	885	.....	100	.....	.....	20	2	.....
King.....	541	7,212	5	1,000	1,280	4	150	1	.....
Klickitat.....	24	656	.....	6,400	.....	4	25	.....	.....
Lewis.....	860	10,318	.....	2,880	640	.....	100	.....	.....
Mason.....	109	386	2	1,760	.....	.....	150	1	\$10 00
Pacific.....	141	721	.....	400	.....	.....	225	2	50 00
Pierce.....	324	2,069	1	750	.....	.....	25	.....	.....
Pend Oreille.....	170	917	.....	520	.....	.....	.....	2	50 00
Skagit.....	512	5,529	2	5,120	3,280	16	250	.....	.....
Skamania.....	1	.....	.....	5,120	80	6	259	1	.....
Snohomish.....	1,082	7,190	8	3,200	.....	.....	1,000	2	77 50
Spokane.....	123	3,863	.....	3,200	3,200	.....	200	.....	.....
Stevens.....	211	1,344	3	480	.....	.....	100	1	.....
Thurston.....	334	2,306	2	200	.....	.....	80	.....	.....
Wahkiakum.....	41	379	.....	1,600	6,400	3	200	.....	.....
Whatcom.....	435	4,206	23	420	191	8	140	1	35 00
Totals.....	6,071	55,512	62	43,678	23,881	44	3,609	14	\$222 50

ORGANIZATION.

The State forest fire service for the season of 1918 was composed of 360 wardens, patrolmen or rangers, of which 293 were on the payrolls of either the State or some of the co-operating agencies as per the following list:

No. 1.	County wardens employed by State.....	17
No. 2.	Patrolmen employed by State under Federal Weeks Law Agreement	50
No. 3.	District wardens employed jointly by State and associations.....	15
No. 4.	(Four inspectors and 68 rangers) employed by Washington Forest Fire Association.....	72
No. 5.	Rangers employed by Eastern Washington Timber Protective Association	2
No. 6.	Rangers employed by five private patrol districts.....	11
		167
No. 7.	Cruisers employed by State Land Commissioner.....	6
No. 8.	National Guardsmen, State military patrol for service during critical period	10
No. 9.	United States army fire wardens and rangers in spruce production and railway construction camps.....	28
		211
No. 10.	Men employed by association for short service during worst part of season	20
No. 11.	Federal forest service employees, commissioned to issue burning permits and enforce State laws in national forests and make arrests	62
		293
No. 12.	Volunteer rangers, composed largely of responsible lumbermen, timber cruisers and traveling salesmen interested in timber or lumbering	67

Numbers 1 to 6 and 11 constitute the regularly paid force employed for the entire fire season and their sole duties are to protect the forests and control fires. The remainder of the organization, excepting numbers 8 to 10 (composed of short service men) and a few of the volunteer rangers, is commissioned to protect their own property or that of their employers, but they co-operate with us in fire troubles.

This organization extends to twenty-three timbered counties of the State, eighteen of which lie west of the Cascade mountains, and five on the east side.

The counties west of the Cascade range are patrolled and protected jointly by the State, the Washington Forest Fire Association, five private patrol districts and the federal Weeks Law service, under co-operative agreements whereby all timber lands are given equal protection and forest fires are controlled and extinguished wherever found.

The counties of Klickitat, Ferry and Spokane are afforded protection wholly by the State employees. Stevens county is patrolled jointly by the State and the federal Weeks Law service, while Pend Oreille county is patrolled and afforded protection jointly by the State, the federal Weeks Law service and the Eastern Washington Timber Protective Association.

County wardens have authority to enforce the fire laws, to employ fire fighters, to impress men into service and have supervision over State and Weeks Law patrolmen in the territory allotted to them.

District wardens have all the authority of county wardens, and in addition have supervision of both Weeks Law patrolmen and association rangers in their district.

Weeks Law patrolmen are conferred with full authority of a warden except that they are limited to employ only a small force until a county or district warden arrives to take charge of the fire.

The inspectors and rangers of the associations and private patrol districts are commissioned and authorized to enforce the forest laws, to make arrests for violation thereof, and to issue burning permits, but they are not authorized to incur any expense or create any indebtedness on behalf of the State.

Volunteer forest rangers, when commissioned by the State Forester, have full authority to enforce the forest laws and make arrests for violation thereof, but they cannot impress fire fighters into service nor create indebtedness on behalf of the State, but they may receive compensation for time actually engaged in controlling fires, when their accounts for such service have been approved by the fire warden in authority and by the State Board of Forest Commissioners.

The federal service appointees have full jurisdiction within the national forests and they co-operate with State forest service in controlling and preventing fires bordering the national forests.

Our regular organization was supplemented by the military organization of the spruce production division of the United States signal corps, headed by Captain John H. Markham. Early arrangements were made for this service and for four district rangers in as many counties. About twenty-five camp rangers were in charge of the operations of the cost plus contractors. A camp ranger was constantly on guard in each camp, with power to enforce fire rules and to call out entire crew should fire occur. Smoking while in the woods was prohibited during part of the season.

These arrangements were very effective in preventing fires, as none occurred in any of the camps until the latter part of September, when two or three fires, caused by attempts at burning debris, escaped control and resulted in some loss and damage.

The total area patrolled and protected by this organization is approximately 9,500,000 acres, of which about 8,000,000 acres is State and privately owned lands in western Washington and 1,500,000 acres in eastern Washington.

This area may be classified in round numbers about as follows:

	Acres
Logged-off, old burn, young second growth and brush land which is not assessed or does not contribute to protection.....	4,000,000
Timber land which is contributing or is assessed for patrol and protection	3,900,000
State owned timber land.....	800,000
Sparsely timbered land in Ferry, Klickitat, Spokane and Stevens counties not contributing or assessed for protection.....	800,000
Totals	9,500,000

From the foregoing it will be noted that considerably less than one-half of the total area patrolled is furnishing the means and most of the voluntary assistance which enables us to protect the forests and control fires. Nevertheless, the source of most of our forest fires, as well as the cost of patrol and fire fighting, is in the logged off lands and old burned areas; therefore, as a matter of justice to the owners of timber, there should be a much larger appropriation or some means afforded requiring owners of these denuded forest lands to assist in fire protection.

The areas patrolled and protected by the different organizations which, in co-operation with the State force, constitute the State forest fire service, are approximately as follows:

	Acres
State, Weeks Law and Washington Forest Fire Association.....	8,000,000
State, Weeks Law and Eastern Washington Timber Protective Association	500,000
State and private patrol districts.....	200,000
State only, except two Weeks Law patrol in Stevens county, the State affording all the protection in Ferry, Klickitat and Spokane counties..	800,000
Totals	9,500,000

IMPROVEMENTS.

LOOKOUTS, TRAILS AND TELEPHONES—1917 AND 1918.

Arrangements were made early in the season of 1917 for co-operative improvement work in the construction of trails, telephone lines and lookout stations. The cost of these improvements was divided about equally between the federal service, State and association, although the only active part taken by the State was in Kiona Peak lookout improvement, Burnt Mountain lookout, Deep Creek trail and Yacolt-Cougar telephone line.

This work consisted of about 16 miles of trail in Clallam, Cowlitz, Snohomish and Lewis counties; 23 miles of new telephone line and 30 miles of reconstruction in Clallam, Cowlitz, Clarke, King and Skamania counties, and the establishment of four lookout stations, one each in Clallam, King, Lewis and Grays Harbor counties; also a ranger station on upper White river.

The Kiona Peak lookout (see illustration) is located about four miles northeast of Randle in eastern Lewis county. A modern lookout building was constructed on the very pinnacle of the peak. At an elevation of over 5,000 feet it rises above all surrounding tree tops, giving an unobstructed view in all directions, particularly overlooking the valleys of the Cowlitz, Cispus and Tilton rivers, and also a portion of the Nisqually valley. The lookout is connected with about five miles of pack trail and about the same length of telephone line.

This lookout was not fully completed until near the close of the 1917 fire season, when the smoke became so dense that accurate observations were almost impossible. A Weeks Law patrolman, paid jointly from federal Weeks Law and State funds, acted as lookout watchman for the season of 1917, while federal forest service and the association paid the lookout watchman for the season of 1918.

Burnt Mountain lookout in Township 30 north, Range 11 west, Clallam county, was established in 1917. It was constructed and equipped with telephone communication at the joint expense of the federal forest service, the association and the Clallam Lumber Company, the State and Weeks Law fund providing for the lookout watchman's salary.

This lookout commands a view of the Solduc, Calawah, Twin, Hoko and Pysht valleys, and being located where dense smoke seldom prevails, its effectiveness and reliability is greater than lookouts located farther inland.

Mt. Si lookout, in the vicinity of North Bend, was established jointly by the association and federal forest service. It commands an excellent view of the north, east and middle forks of the Snoqualmie valley. It was operated by the association for a period of about six weeks during the season of 1917.

All three of these lookouts were in telephone communication with our nearby wardens, patrolmen and rangers.

During the season of 1918 a lookout watchman was maintained on a prominent peak in the Polson Logging Company's patrol district. This lookout commanded a view of considerable territory outside of the Polson district. Therefore arrangements were made for co-operation of the association in payment of the lookout watchman's salary.

A very neat ranger station was constructed by the association in the upper White river valley at the junction of the Greenwater. This affords a comfortable abode to the ranger patrolling the upper White river and Greenwater valleys.

The trail construction affords access to remote localities; likewise the telephone affords a means of conveying information to our warden or rangers of the existence of forest fires in such localities. ' .

The value of the lookout in western Washington as a practical unit to the protective service is questionable. While it is true that during early weeks of the season, when little smoke prevails, fire can be detected and located more readily by lookout watchmen than by patrolmen or rangers in the valleys, yet, when the smoke becomes dense, and this is usually when the worst fire weather prevails, the effectiveness of the lookout is very much impaired, if not entirely destroyed. Such was the case with the Kiona Peak lookout both in the seasons of 1917 and 1918, at the time of the very bad fires in the vicinity of Morton and Lindberg. We have records of only two or three instances where fires were discovered by lookout watchmen that were not likewise discovered at about the same time by some patrolman or ranger. It would seem that the greatest value of the lookout is in the discovery of lightning fires or fires in remote localities where man seldom goes. Two such fires were discovered this season and were promptly controlled.

Further experiments will be conducted with a view of determining the value of the lookouts as compared with other branches of the service.

FOREST FIRES AND LOSSES.

(See Tables Nos. 5 and 6).

The outstanding features of the fire seasons of 1917 and 1918 are the excessive losses and exceptional high cost of protection. Each season exceeds previous records in respect to area burned over and losses to timber and other property. The loss to lumbermen and settlers for 1918 in particular has been enormous; also the expense of fire fighting and protection is without parallel. It was found necessary during both seasons to suspend issuing of burning permits at critical periods and to cancel all permits outstanding.

These conditions were caused by an unfortunate combination of circumstances.

- 1st. War conditions greatly increased demands on our forest products, with attendant accumulation of inflammable debris.
- 2nd. Periods of extremely hazardous fire weather ensued.
- 3rd. Drafting of experienced woodsmen and lumbering employees for the army and navy, and replacing them with thousands of men unfamiliar with forest conditions, increased the fire risk.

The fire season of 1917 did not become serious until after July 4th, when there ensued a period of over 60 days in western Washington and 90 days in northeastern Washington without rain. Fire conditions became alarmingly acute in the month of August when many destructive, as well as expensive, fires occurred. About September 8th moderate rains checked the fires in many localities, but another dry period commenced the last week in September, lasting five or six weeks. Many fires started, making it necessary to call out some of the wardens.

Eastern Lewis county sustained the greatest loss, in both timber killed and destroyed, there being about 130,000,000 board feet killed and 8,000,000 feet destroyed.

Pend Oreille county stands next in loss of timber and leads all other counties in value of logs and other timber products destroyed, as well as in cost of controlling fires.

King county leads all others in loss and damage to settlers.

Snohomish county sustained the greatest loss in logging equipment and total loss, which was principally due to a fire starting in the logging operations of the Danaher Lumber Company near Darrington. It was a very hot day and the fire quickly spread to both sides of the valley, causing a very heavy loss to both logging equipment and logs. The loss to standing timber was light.

Notable among the losses this season was the burning of three automobiles which were overtaken or trapped on the highway by forest fires.

The fire season of 1918 will be noted for its early spring and late fall fires. The first fire occurred about April 15th and the last November 23rd. There were two distinct fire periods, the first extending from April to July 9th and the second from August 23rd to October 5th. A new drought record was made covering the three months of April, May and June, and likewise for September.

During the first period, hot winds on June 8th and 9th caused the first destructive fire and one of the heaviest losses of the season. Fire conditions continued hazardous, reaching a climax the first week in July, when several very destructive fires occurred.

There were so many expensive fires early in the season that the question of financing became a very serious one. Wherever possible, arrangements were made with the associations to take over all of the fire fighting costs and a portion of the salary and all the expenses of fourteen wardens, and as many more Weeks Law patrolmen. Even with this assistance we felt it was necessary to cast about for additional co-operation. Therefore, arrangements were made with the spruce production division of the United States army to take full charge of fire fighting and patrol in all of the camps operated under cost plus contracts.

From July 9th to August 20th there was sufficient rainfall to practically extinguish all the earlier fires. Electric storms were numerous, causing more lightning fires than have previously been reported. Some of these were in remote localities and were difficult to extinguish, but none caused much loss. At the close of the third week of August the forests were generally thoroughly rain-soaked and fire conditions were so favorable that it was considered safe to lay off some of the force September 1st, but telegraphic news from the weather bureau predicting increasing fire weather conditions prompted us to retain all of the wardens and most of the patrolmen.

Hot weather with easterly winds at this time caused many fires and a few losses. Dry weather continued during September with occasional threatening rains, finally culminating the last week of the month in more hot days, with easterly winds fanning smoldering fires into flaming forests. Two very destructive fires occurred at this time, causing the major losses of the season.

The three most noteworthy fires are described as follows:

1st. On June 9th a fire started on the borders of the Olympic national forest in the Dosewallips valley. A strong wind quickly spread the fire, killing some green timber and burning a large area of old logging works, doing damage to logging equipment and other property, estimated at \$45,000.00.

2nd. On September 27th fire occurred in the operations of the Simpson Logging Company in western Mason and northeastern Grays Harbor counties. It burned an area of some 8,000 acres, causing loss and damage exceeding \$60,000.00. Livestock, a school house and farm buildings were among the property destroyed.

3rd. Also on September 26th fire started from a spark from a logging engine in the operations of the East Fork Logging Company on the east fork of Tilton river in the vicinity of Morton, within a short distance of the location of the most damaging fire of 1917.

The fire was held somewhat in check the first day, but the second day a strong wind blew it across the fire trail and railroad and it quickly spread to the west side of the valley, where it entered the national forests. It completely destroyed the town of Lindberg and the equipment of two logging camps, some bridges and logging cars. It burned over an area of 3,500 acres, of which 1,900 acres was standing green timber. About 80,000,000 feet were fire-killed and 3,000,000 feet were destroyed, resulting in a total estimated loss of \$75,000.00.

There were numerous other expensive and destructive fires during the season which, in order of their importance, are listed as follows:

Bloedel-Donovan Company in Skagit county.
Cathlamet Timber Company in Wahkiakum county.
Ostrander Railway & Timber Company in Cowlitz county.
Simpson Logging Company (early fire) in Mason county.
A. W. Knight & Company in Whatcom county.
Cosmopolis Commercial L. & T. Company in Grays Harbor County.
North Bend Lumber Company in King county.
North river fire in Pacific county.
Cedar Lake Logging Company in King county.
Heybrook fire in Snohomish county.

Three of these fires occurred in May and early June, two during the first week in July, two early in September and two the latter part of September, the losses ranging from \$12,000.00 to \$40,000.00.

The federal forest service suffered two very bad fires. The first occurred in June in what is generally known as the Claspus burn in eastern Lewis county. It extended over a large area of old burn which in many places bore an excellent stand of young growth timber, which was the principal loss.

This fire, being in a remote mountainous region, was very expensive to control. It caused the federal forest service more or less trouble until extinguished by fall rains.

The second fire occurred early in September in the Duckabush valley in the Olympic national forest. It burned over a large area, killing many million feet of mature timber. However, as this timber is conveniently located to Hoods Canal it can be salvaged with little loss from decay.

Among the notable losses to other than loggers and lumbermen were numerous rural homes, farm houses and outbuildings, a school house and some thirty-five head of livestock; also about fifteen buildings in the town of Lindberg and eleven buildings in the old town of Cedar Falls.

The freak fire of the season was the last one, which started in the logging works of the White River Logging Company, near Enumclaw, on the afternoon of November 23rd. A heavy wind was blowing, which caused it to burn over about 120 acres in an hour's time. We have no previous record of forest fires burning a large area like this so late in the season.

CO-OPERATION.

Co-operation has been extended and improved among all agencies and organizations in a most gratifying manner and there has been a better spirit manifested by citizens toward our work, with a willingness to assist us, as well as one another, in time of fire trouble, regardless of boundary lines or ownership of land.

The agencies co-operating with us have already been enumerated under "Organization." There is other co-operation worthy of mention, which is as follows:

1st. At the meeting of the Pacific Logging Congress and Western Forestry and Conservation Association, held in Portland in October, 1916, a committee representing the federal forest service and the States of Oregon, Idaho, Montana and Washington was appointed to standardize, in so far as practic-

able, the blanks, reports, rules and instructions, also tools and equipment for forest officers and fire fighting crews.

The committee met in Spokane in March, 1917, at which time we adopted a uniform set of reports in loose leaf forms and covers that have since been used by our field forces. The effect of this, in addition to being a convenience to the employees, has been the gathering of more uniform information and data by the State and co-operating organizations.

Being unable to complete the manual of standard rules and regulations at this meeting, sub-committees were appointed to take up the various chapters, of which six have been published in loose leaf form, but they were received so late in the season that they were not distributed.

At this meeting an invitation was extended to Mr. J. G. Peters, chief of State co-operation under the Weeks Law act, to visit the northwest states in May or June for the purpose of meeting the various co-operative organizations at the opening of the season's work. The invitation was accepted and arrangements were made for a general meeting in Spokane, where he met the heads of the principal organizations and many others.

Mr. Peters' address on the subject of federal co-operation under the provisions of the Weeks Law gives such a clear explanation of the policy of the government toward the states and forest protective organizations, that as a matter of interest to our co-operators, extracts from his address are given below:

"The requirements of this fire protection provision of the law, besides that which limits the protection to private or State forest lands on the watersheds of navigable streams, are that the State must have provided by law for a system of fire protection, and that the expenditure by the federal government in any fiscal year cannot exceed that by the State in the same year. Further, the law authorizes the Secretary of Agriculture to co-operate with the State in the organization and maintenance of a system of fire protection 'on such conditions as he deems wise.' Under this discretionary authority given the secretary, a broad general policy has been adopted in expending the federal funds, which has for its chief objects: (1) to promote fire protection by states, counties and associations of owners, and (2) to develop closer co-operation among various agencies engaged in protective work and weld more or less scattered efforts into an efficient, organized system. While these are the most important features of our policy, we recognize at the same time that the government has an obligation to participate permanently in the protection of the watersheds of navigable streams. It is the position of the forest service that the solution of the national problem of protection from forest fires requires the continued participation of the federal government, and that the enormous public interests involved in the protection of forest and water resources will not permit the government to withdraw from this work after a brief period of educational effort. It is therefore the policy of the government to continue this work permanently, if only on a small scale, as an active associate of the states and private owners.

"Co-operation has been entered into, through written agreements, with twenty-one states, including Maine, New Hampshire, Vermont, Massachusetts, Connecticut, New York, New Jersey, Maryland, Virginia, West Virginia, North Carolina, Kentucky, Texas, Michigan, Wisconsin, Minnesota, South Dakota, Montana, Idaho, Washington and Oregon. Louisiana will probably be added next winter, making the twenty-second. The chief result accomplished by this co-operation, besides the purchase of a certain amount of protection, has been educational, especially in encouraging the states which have had no protective system to enact legislation providing for one and appropriating funds therefor. Furthermore, private owners have been encouraged through State and federal co-operation to come into the game and, where practicable, to organize into associations such as those so efficiently conducted in the Pacific Northwest. You may be interested to

know that associations of this character have been formed in eight states outside of this region.

"The federal appropriation of \$100,000.00 is allotted among the states on the basis of the greatest good to the greatest number. A maximum is fixed, depending upon the number of states to receive co-operation. At first this was \$10,000.00, but the increase in the number of states has necessitated its reduction to \$8,000.00. The states receiving this sum are: Maine, New York, Minnesota, Washington and Oregon."

2nd. Following this meeting we were honored with Mr. Peters' attendance at several of our warden and ranger meetings. His presence added interest to the meetings and his addresses on co-operation were very instructive to the field force. Later he made a trip of inspection to the Kiona Peak lookout station, which was then in course of construction. Altogether, he spent about three months visiting the various organizations in Washington, Oregon and Idaho.

Fifteen forest officers' meetings were held throughout the State in 1917. They were attended by all the State, association and federal employees who could conveniently attend. All of the meetings were attended by the chief fire warden for the association, G. C. Joy, and by the inspector of Weeks Law patrolmen, Norman G. Jacobsen. Assistant district forester, Charles H. Flory, also attended several meetings.

Like meetings were held in 1918, but fewer in number, partly because of economic reasons, but principally because of critical fire weather conditions. R. H. Chapler was inspector of Weeks Law patrol and attended all meetings. He also visited the patrolmen later and otherwise assisted in co-operation.

3rd. The prolonged drought of 1917 in northeastern Washington, which continued into the open hunting season, brought forth insistent appeals for a proclamation suspending hunting until after rains. The Governor promptly came to our assistance by issuing the proclamation, but rains soon made fire conditions safe.

Again, in midsummer of 1918 at a most critical time, when hundreds of brush fires, with which our force was unable to cope, were burning, the Governor was appealed to for assistance.

Arrangements were immediately made with the adjutant general for a detail of 30 National Guardsmen to patrol the highways and camping places, warning tourists and others to refrain from starting fires in the forests. At the same time the following proclamation was issued. It was widely circulated and we have every reason to believe that it had a wholesome effect in restraining people from starting fires:

PROCLAMATION.

BY THE GOVERNOR.

The serious situation confronting the State forest fire service calls for the adoption of stringent measures to prevent fires.

According to the records of the weather bureau, April, May and June were unusually dry, only 2.63 inches of rain falling as against a normal rainfall of 7.50 for these months.

With the two driest months of the year still ahead of us, the forest fire situation is already serious and threatens to become alarmingly acute. Loggers, lumbermen and railroad companies have already been appealed to to use every preventable means to prevent further fires and to control those now burning.

So that this situation may be controlled, I urge that there shall be no further burning for land clearing until there has been a sufficient rainfall to make this

work safe, except the burning of logs, stumps or piles in open fields at a safe distance from other forest material and, furthermore, that the burning of slashings this season be limited to those designed to clear land for immediate agricultural use and then only in strict compliance with the law and after a permit has been obtained from the State Fire Warden.

There is no more important service to be rendered by the State of Washington to the nation at this time than by being able to supply the lumber required in the construction of ships and aeroplanes. No State in the Union can serve the nation in this respect to as great a degree as can Washington. I, therefore, make direct appeal to all campers, hunters, fishermen, berry pickers and tourists to refrain from starting camp fires in or adjacent to forests, old burns, logged-off land or forest debris of any kind. The only safe place where camp fires can be built, under weather conditions now existing, is upon gravel bars or sand bars of creeks and rivers, or upon the shores of salt water. Even when fires have been so built, it is absolutely necessary that they be entirely extinguished after their use.

In witness whereof, I have hereunto set my hand and caused the seal of the State to be affixed at Olympia this ninth day of July, A. D., 1918.

[SEAL]

By the Governor:

I. M. HOWELL,
Secretary of State.

ERNEST LISTER,
Governor of Washington.

4th. The State, federal service and association co-operated in paying the expense of placing a forest service exhibit at the Yakima, Puyallup and Southwestern State Fairs. The exhibit was prepared and in charge of A. G. Jackson, of Portland, Oregon.

The spruce production division, United States signal corps, commenced its activity in getting out aeroplane materials early in 1918 and in anticipation of their operations creating large quantities of debris scattered through the forests, early arrangements were made to supervise this work. State funds being too low to admit of employing fire wardens out of season, and this being strictly war activity work, arrangements were made for the employment by the contractor of two district wardens to inspect and advise in the disposal of debris. This arrangement continued until the opening of the fire season, when the spruce production division took full charge.

Rules and regulations for the disposal of debris arising from these operations, and also from the operations of road and railway construction, were issued and distributed to the spruce production division and to all their contractors.

All things considered, it can be said that their organization did good work, although hampered at times for lack of men. The disposal of debris was kept well abreast of the work, except on the right-of-way of the Seims-Carey, H. S. Kerbaugh railroad in Clallam county, where very little burning or clearing had been done up to the time of suspension of government work. Shortly afterwards large forces of soldiers were put at work clearing debris on this entire right-of-way, but the forests had become so wet that it was very difficult and expensive to make any progress.

I understand that arrangements are being made to set aside sufficient funds to complete the clearing of the remaining debris as soon as there is favorable weather in the spring; also that funds are being set aside to provide patrol next season and for fighting fires which may occur.

As soon as the fire season was over one of our district wardens was again employed to inspect and advise in the matter of the final clearing under same arrangements as made in the early spring. He reports the progress of

the final clearing to this office and also to the spruce production division. The chief fire warden of the association has also devoted several weeks' time to this work.

Sergeant T. S. Goodyear, formerly assistant forester, donned the khaki in February and was at once detailed for ranger duty in the Pacific county spruce camps. His knowledge and experience in the work were valuable from both federal and State standpoint.

In conclusion, I will mention briefly valuable co-operation we have had both in money and service.

1st.	In 1917 the federal service allotted Weeks Law funds for improvement work on Kiona Peak lookout station.....	\$347 27
	For Deep Creek trail, Clallam county.....	150 00
2nd.	In the month of September, when State and association funds were rapidly becoming depleted, an appeal to the chief of State co-operation brought an additional allotment to pay Weeks Law patrol for September.....	500 00
3rd.	At the beginning of the 1918 season, in anticipation of possible enemy incendiarism, war activities and wages causing an unusual drain on our finances, the board addressed a letter to our congressmen and to the federal forest service requesting an allotment of \$10,000.00 Weeks Law fund for the season of 1918. This brought about an amendment of Weeks Law Agreement, increasing wages of patrolmen to \$3.50 per day and the allotment was increased to cover this additional outlay, amounting to.....	1,400 00
4th.	An allotment of \$150.00 was also granted for co-operation on Yacolt-Cougar telephone line.....	150 00
	Total by Weeks Law, not including co-operative work and assistance by Weeks Law patrolmen.....	\$2,547 27
5th.	The Rainier national forest also co-operated on Kiona Peak improvement in the year 1917 to the amount of approximately.....	\$200 00
	And in 1918 by paying one-half of lookout watchman's per diem and expense.....	150 00
	Total	\$350 00
6th.	The Washington Forest Fire Association co-operated in a financial way as follows: By paying a portion of per diem and all expense of fourteen Weeks Law patrolmen.....	\$5,063 00
	By paying an excess of more than half of the per diem and expense of fourteen district wardens.....	5,503 41
	By paying for closing work of county wardens.....	367 40
	By paying all expenses of National Guard patrol.....	944 61
	By paying one-half of Kiona Peak lookout expense.....	150 00
	By paying excess of more than one-half of fire fighting costs.....	5,094 20
	By co-operating in preparation of assessment records and lists, estimated	600 00
	Total cash co-operation.....	\$18,322 62
	Grand total federal and association.....	\$21,219 83

The United States weather bureau by its advance telegraphic reports of increasing fire hazard weather has given the State forest fire service co-operation of inestimable value. While this information occasionally fails to develop as predicted, yet in most cases the forecasts have been reliable and have enabled us to get telegraphic or telephone notices to our wardens in time to warn railroads, loggers and ranchers of impending hazardous fire weather.

A representative of the weather bureau spent several weeks in this State investigating conditions which affect the forecasts in some localities.

An appeal was also made to our congressmen to provide the weather service with funds for further investigative and experimental purposes.

PUBLICITY.

The usual amount of publicity was given during the seasons of 1917 and 1918.

Items of interest were frequently furnished the press, while thousands of letters and circulars concerning patrol, protection and disposal of fire hazards were sent to timber owners, lumbermen and ranchers.

Over 15,000 "Fire Warning" posters, one-half on cloth and one-half on cardboard, were printed and distributed and posted during the two seasons. Logging camp "Fire Rules" for adoption and use by operators were also furnished and distributed by our fire wardens. Thirty-five hundred copies of Governor Lister's proclamation concerning precaution with fire were posted throughout the forested areas, and the proclamation was also given wide publicity through the State press.

RECOMMENDATIONS AND SUGGESTIONS.

The past two seasons have again witnessed an increased use of automobiles until now almost every district having good roads is patrolled by this means. There is no longer any question of the economic saving or of the increased efficiency by the use of automobiles. Sixty-five autos (mostly Fords) were in use by the State and association field force this season, being more than double the number used in 1916.

I recommend further extension of this auto service to cover all districts having fairly good roads. I also recommend that all employees using autos as a means of patrol be equipped with a ten-gallon water bag and a hand force pump for use in extinguishing fires. This equipment has proved very useful in extinguishing fire in logs or in snags up to twenty-five feet in height.

It is believed that the aeroplane and hydroplane have now reached a stage of development where they should be given a trial as a competitor of the lookout stations in the discovery and reporting of forest fires. They certainly have the advantage of affording a closer observation than is possible for the lookouts, besides determining whether the fire is accidental or set for purpose of clearing land, and if it is being controlled.

The possibility of the flying machine becoming a valuable unit in forest protection justifies the expenditure of funds in giving it a full and fair trial.

I would therefore recommend that the State co-operate with the federal forest service or with the association, or both, in an investigation and trial of flying machines as a means of detecting and reporting forest fires.

It is further recommended that all logging camps and sawmills located in the forests employ an experienced fire fighter, whose sole duty during dry periods shall be as follows:

- 1st. To patrol the operations and generally guard against fires.
- 2nd. To inspect fire boxes and screens of donkey engines and locomotives, and see that they are equipped to prevent spread of fire therefrom.

3rd. To see that snags are cut down and inflammable debris is cleared for a proper distance around engine settings, and that water, hose and buckets are on hand.

4th. To organize and instruct the crew in fire fighting, and to look after the necessary fire fighting tools and equipment.

5th. To have general charge of everything in and about the camp pertaining to fire fighting, including authority to call out entire crew in the event of fire.

We believe that the adoption of these suggestions would lead to a reduction of logging camp losses by at least 75%. Conservative estimates place these losses for the years 1917 and 1918 at \$500,000.00, which sum would pay the wage for a number of years of a fire chief for each logging camp within the State.

Furthermore, fires occurring during these critical periods are so much more destructive than under normal conditions that the economic loss caused by the delay in the renewal of operations is another large sum to be considered in favor of these suggestions.

All things considered, it is certainly good business to spend a little more in preventing fires than to have them occur at a time when they cannot be controlled. This particularly refers to the burning of logging slashings in seasonable weather, either in early spring or after the first fall rains, when it can be done with little danger of great losses.

The constantly increasing area of deforested land with attendant fire risk requires corresponding increase in patrol or other means of fire protection. In the past three seasons the necessary increased protection has been partially supplied by an increased use of automobiles, which has made it possible for our patrol force to double the frequency of their patrol besides covering larger districts, but we have now reached a point where it would seem that an increase in the number of patrolmen and rangers is imperative if we are to continue to successfully control fires.

In this connection, I will state that there has been no increase for the past three years in the number of our regularly paid force, although the force has been supplemented during critical periods by twenty to thirty short service patrolmen or rangers.

The foregoing facts justify an increase in the regular patrol force of twenty-five additional patrolmen, which is equivalent to one extra man for each forested county. They should be distributed and located according to the increase in lumbering activities.

Constantly growing losses caused by logging camp fires would seem to warrant the adoption by loggers of additional measures to prevent the recurrence of these destructive fires or at least such as may be prevented by the adoption of reasonable regulations.

A large per cent of logging camp fires are preventable if proper care and precaution are exercised. Statistics point to the fact that our greatest losses, both in timber and logging, occur during periods of high temperature and particularly when accompanied with wind. It is therefore recommended that all sawmills located in the forests and all logging camps operating donkey engines, locomotives or other spark emitting machinery, cease operating whenever the thermometer registers 80 degrees or more.

Table No. 9—Continued.

Year	State war-dens	Organi-zation rangers	Weeks law Patrol-men	Number arrests	Amount of fines and costs	Number burning permits issued	Number fires without permit	Total area burned, acres	Loss and damage, mostly timber	Losses, improvements and logging	Merchant-able timber killed, board feet	Merchant-able timber destroyed, board feet	Num-ber camp sites	Miles trail or fire line
1905	22	.....	.....	3	.....	2,542	963	.....	.....	.....	.....	.....	.....	.....
1906	22	.....	.....	.....	.....	2,455	1,100	107,740	\$224,430 00	.....	.....	.....	.....	.....
1907	19	.....	.....	.....	.....	1,492	991	10,590	54,600 00	.....	.....	.....	.....	.....
1908	21	60	.....	.....	.....	1,845	464	21,018	88,800 00	.....	.....	.....	.....	.....
1909	21	76	.....	20	\$208 75	2,537	866	13,668	27,866 00	.....	30,000,000	13,950,000	.....	.....
1910	22	75	.....	38	1,060 75	2,183	867	166,697	86,962 00	.....	86,600,000	6,450,000	.....	.....
1911	37	86	.....	54	1,291 00	6,972	437	113,171	22,190 00	.....	88,660,000	11,090,000	.....	.....
1912	30	87	.....	9	238 00	7,048	180	121,960	29,140 00	.....	410,800,000	16,485,000	.....	.....
1913	30	80	.....	3	.....	10,430	646	110,479	1,000 00	.....	1,000,000	500,000	.....	.....
1914	33	80	36	3	428 70	12,444	681	200,365	86,288 00	.....	26,860,000	18,141,500	.....	.....
1915	43	86	42	20	66 50	12,625	493	170,547	10,000 00	.....	13,885,000	5,949,000	.....	.....
1916	33	86	50	6	41 35	10,088	321	157,454	14,000 00	\$85,374 00	18,600,000	5,335,000	117	880
1917	32	86	51	14	311 25	8,273	965	208,768	51,531 80	240,273 00	189,837,000	22,662,000	80	862
1918	32	86	50	14	212 50	6,071	964	212,868	66,034 00	472,235 50	153,142,000	13,816,000	44	211
	387	833	313	184	\$3,876 80	85,401	8,487	1,690,100	\$708,075 80	\$797,862 50	963,634,000	114,678,500	191	903

CONCLUSION.

To Governor Lister, the members of the State Board of Forest Commissioners; also to the State forest fire service, the office force and our co-operators in general, I extend my most sincere thanks for assistance in promoting the best interest of the department.

A handwritten signature in cursive script, reading "Fred E. Tape". The signature is written in dark ink and is positioned centrally on the page.

State Forester and Fire Warden.

The Biennial Report

OF THE

Board of Geological Survey

OF THE

State of Washington

FOR THE TERM 1917-1919



OLYMPIA, WASH.
FRANK M. LAMBORN  PUBLIC PRINTER
1919

LETTER OF TRANSMITTAL.

To the Legislature of the State of Washington:

The Board of Geological Survey transmits herewith its biennial report for the term 1917-19, as required by statute.

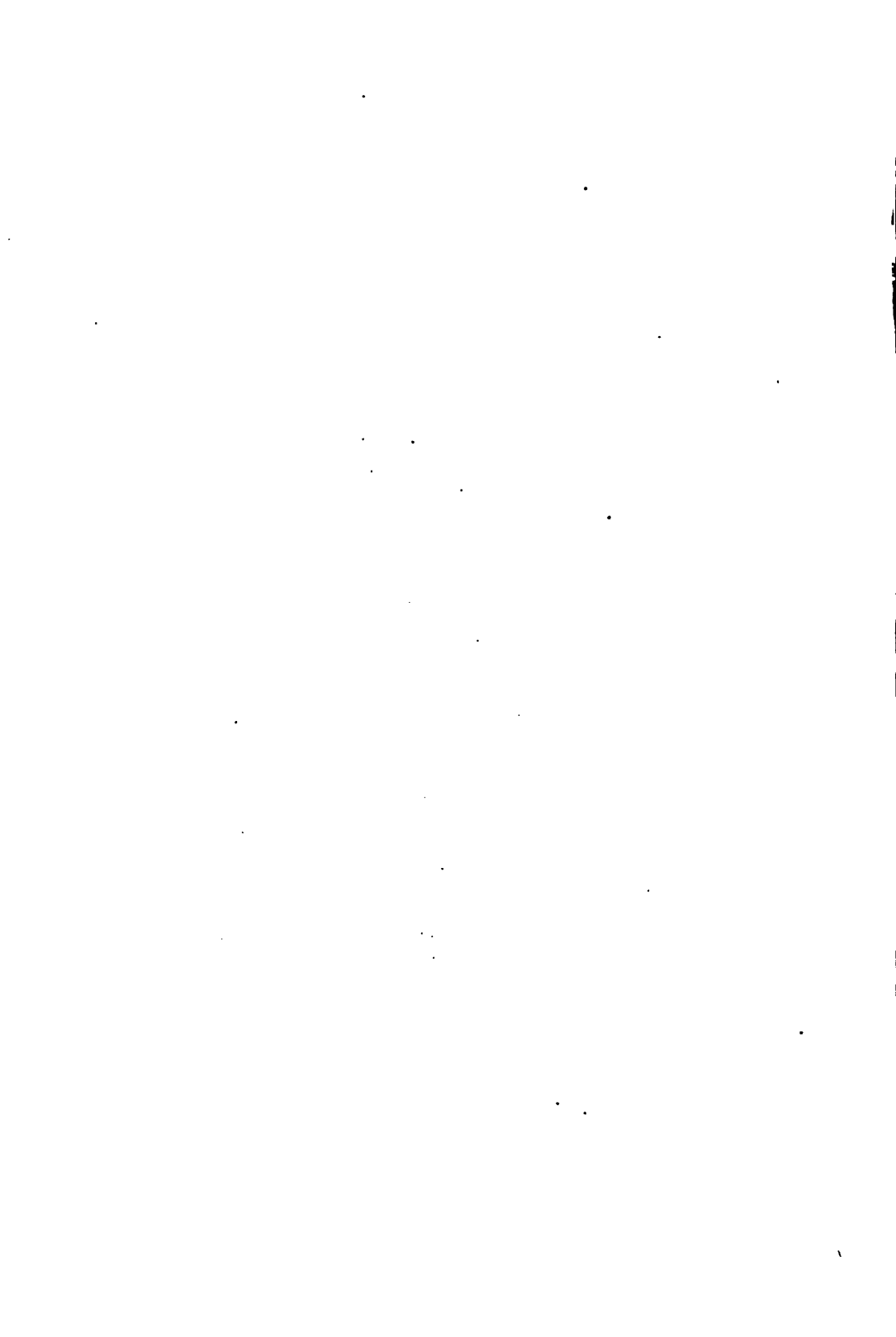
Respectfully submitted,

ERNEST LISTER, *President*,
LOUIS F. HART, *Vice President*.
W. W. SHERMAN, *Secretary*,
HENRY SUZZALLO,
ERNEST O. HOLLAND.

Olympia, December 22, 1918.

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BIENNIAL REPORT OF THE BOARD OF GEOLOGICAL SURVEY

GENERAL PURPOSES OF SURVEYS.

TOPOGRAPHIC SURVEYS.

The Topographic Map.—A topographic map is designed to represent the form and slope of the surface of the land and the elevation of all points above sea level. The positions of streams, lakes and ponds, public and private roads, towns and railroads, are shown in their correct relative positions. The map indicates boundaries of counties and the position of section lines wherever there have been land surveys. In the making of the necessary surveys for such maps permanent marks, consisting of iron posts, copper bolts or tablets, are set at frequent intervals to mark the exact elevation above sea level to serve as datum points for further spirit level work, for engineering investigation, and for such public works as canals, water supply, railway and other public or private surveys.

The topographic map is made with such accuracy and in such detail that it is useful to almost every citizen. In a new state that is inviting immigration, the map is valuable in order to show the location of desirable farm lands and the general character of the country. From it the positions of streams and lakes may be seen and the possibilities of these for purposes of water power or irrigation may be largely determined. The topographic map facilitates the construction of railroads and wagon roads, since upon it available routes and grades may be laid out without the preliminary surveys ordinarily necessary for improvements of this kind. In our public schools such a map is indispensable in that it places before the children truthful maps of our commonwealth, instead of those that are glaringly inaccurate.

In the making of topographic maps the areas selected for survey are defined by lines of latitude and longitude and are called quadrangles. Each quadrangle, and the topographic map which represents its features, is designated by the name of the most prominent place or topographic feature included within it. The scale generally used in map construction is about two miles to the inch, and on this scale the area embraced in a quadrangle is about eight hundred square miles. In Washington, the topographic map when completed will comprise, in round numbers, ninety sheets, complete and fractional, of which about forty have already been surveyed.

HYDROMETRIC SURVEYS.

Hydrometric surveys furnish a basis for determining the water resources of the state. They are essential to indicate the supply of water suitable for domestic and industrial purposes, for comprehensive development of power and irrigation projects, for navigation and flood prevention, and for wise and equitable sanitary regulation. The water supply is of more importance to the life and pursuits of the people than any other natural resource, as the health and economic development of every community are directly dependent upon the character and volume of the available supply.

Our water resources are unlike the other mineral resources in that they are continually existent. Our coal beds and mineral lodes are exhausted when mined and placed upon the market, but the water supply is constantly renewed. Therefore, failure to put water into beneficial use is an economic loss, for the energy and utility does not serve the needs of civilization effectively prior to hydraulic development.

When estimates and designs for hydraulic development are made, all essential physical details, except stream flow, can be determined within a relatively short time. The amount of water available and its seasonal distribution can be ascertained only by a study of stream flow records extending over a series of years. Many irrigation and power projects have failed on account of being placed in operation without an adequate knowledge of stream flow. Others designed upon the basis of short time records have levied an enormous toll upon the public through high rates made necessary by unexpected seasonal variation in flow. The run-off for streams in Washington is extremely irregular, especially in respect to minimum flow which is most important in considering operation of any project.

Comparative run-off values are shown in the following table:

COMPARATIVE RUN-OFF OF SOME STREAMS IN STATE.

STREAM AND LOCATION	Run-Off in Second Feet per Square Mile for Year Ending September 30, 1917	
	Minimum Calendar Month	Average for Year
Baker River near Concrete.....	3.43	10.40
Quinault River near Quinault.....	2.29	7.44
Skagit River at Sedro Woolley.....	1.55	5.22
Puyallup River at Puyallup.....	1.43	3.97
Yakima River at Ole Elum.....	0.77	4.13
Spokane River at Spokane.....	0.52	2.07
Pend Oreille or Clark Fork at Metalfine Falls.....	0.35	1.27
Columbia River at Priest Rapids.....	0.31	1.34
Methow River at Pateros.....	0.20	0.79
Snake River at Riparia.....	0.18	0.63

The foregoing indicates that Baker River yields 19 times as much water per unit of area for the minimum calendar month and 16.5 times as much for the year as Snake River.

Aside from the design and operation of irrigation and power projects, stream flow records are vitally essential in considering means of preventing damage from floods. Occasionally "Chinook" winds accompanied by heavy rains melt the snow in the mountains, causing disastrous floods in the lowlands.

A serious flood of this kind occurred December, 1917. Fortunately data were obtained at a large number of gaging stations from which maximum flow was computed. Similar floods are reported for 1896, 1897, 1906, and 1909. Few gaging stations were in operation during the early floods but information has been collected for estimating flood discharge of a number of rivers during those years by using the high flow computed for December, 1917, as a basis.

Hydrometric surveys cover two fields of investigation, the surface supply and the underground supply. The surface supply furnishes by far the greatest volume of water and is readily accessible in the various rivers and creeks.

Gaging stations are maintained along principal streams of the state for determining the daily flow throughout a series of years. Daily records are published and are used extensively in designing hydraulic works of all kinds.

The successful operation of irrigation projects has demonstrated enormous agricultural possibilities in eastern Washington. A vast acreage in central eastern Washington is susceptible of irrigation and is capable of doubling or trebling the present agricultural products of the state. Comprehensive plans for development should be devised whereby arid regions will gradually be converted into producing farms.

The state will ultimately be benefited greatly through hydro-electric development because it ranks first among the states in the Union in respect to estimated potential water power.* One transcontinental railway is installing electrical equipment to provide motive power for over 200 miles of its main line within the state and another has used electrical energy for operating trains through a Cascade Range tunnel for a number of years. It seems certain that all railways in the state will be electrified and that combined advantage of large natural resources in raw materials and cheap electrical power will eventually insure Washington predominance in industrial activity.

Water power possibilities are being investigated as rapidly as possible. The records of flow indicate water supply. River profiles or level lines along the principal power streams indicate the fall, dam sites, reservoir sites, and other pertinent data. An analysis of the information is being made in a series of seven reports on the water powers of the Cascade Range, three of which are published. These reports summarize the most reliable information obtainable and will greatly encourage hydro-electric enterprise.

Investigation of underground water supplies is equally as important as in the case of surface waters. This work includes a determination of the areas that are underlaid by water-bearing strata, of the depths at which these strata occur, and of the amount and quality of water that may be obtained. A knowledge of the existence of water-bearing strata is very necessary, not alone for the purpose of irrigation, but in some parts of Washington settlement is well-nigh impossible because not even enough water for domestic purposes has as yet been obtained.

GEOLOGICAL SURVEYS.

Geological surveys have been organized in nearly all the states of the Union, and in some of the older states they have been continuously active for over fifty years. In most states they are regular departments of the state government, and receive definite financial support in the way given to every other bureau or department. They are usually in charge of a board of three or five men, who direct the work of the survey, and who are responsible for its management.

The general purpose of a geological survey is to disclose and make known the mineral resources of a state. Under such heading would naturally come the metalliferous deposits, coal fields, iron ores, building stones, soils, clay beds, road materials, water power, and kindred subjects. The field work of a survey con-

* A report of the Commissioner of Corporations for March 14, 1912, pp. 55-56, summarizes the potential water power in each state. Washington is credited with a "minimum" potential water power of more than a million horsepower greater than for any other state. The three states having the greatest "minimum" potential water power are as follows: Washington, 4,932,000 horsepower; California, 3,424,000 horsepower; and Oregon, 3,148,000 horsepower.

sists in mapping accurately the locations of all such valuable products as those just mentioned, and determining the areal extent and quantity of each. The office work consists of careful tests and analyses of all samples collected in the field, and the preparation of reports which describe fully the mineral resources under investigation. The reports and maps when published are valuable alike to the citizens of the state and to outside capitalists and investors. Surveys examine and test those minerals, ores and rocks that are but little known and determine whether or not they are of economic value. They also suggest ways of preventing waste in mining operations, and assist in all ways to conserve the natural resources. Surveys are potent factors in making available valuable information regarding the mineral resources of the state, which knowledge may be utilized by the poorest citizen as well as the wealthiest corporation.

PRINCIPAL FEATURES OF STATE LAWS PROVIDING FOR SURVEYS.

The law establishing a state geological survey was passed by the legislature at the session of 1901. As set forth in the various sections of the law, the principal objects of the measure are as follows: An examination of the economic products of the state, such as gold, silver, copper, lead, and iron ores, as well as building stones, clays, coal, and all mineral substances of value; an examination of the soils, road-building material, water supplies, artesian wells, water power, etc.; an examination of the physical features of the state with reference to their practical bearing upon the occupations of the people; the preparation of special geographic and economic maps to illustrate the resources of the state; and the publication from time to time of the results of the work of the survey in reports and bulletins, and the dissemination of these among the people.

At the session of 1903 the legislature amended the above law, by providing for cooperative work between the federal and the state bureaus engaged in geological survey work. The amendment authorized the state board of geological survey to make provisions for topographic, geologic, and hydrometric surveys of the state, in cooperation with the United States geological survey, in such manner as would be of the greatest benefit to the agricultural, industrial and geological requirements of the state. The amendment carried a proviso that the director of the United States Geological Survey should agree to expend on the part of the United States upon such surveys a sum equal to that expended by the state.

At the session of the legislature for 1909 the work of the state geological survey was provided for by a law having these provisions:

Section 1. In order to complete the topographic map of the State of Washington, and for the purpose of making more extensive stream measurements, and otherwise investigating and determining the water supply of the state, there is hereby appropriated the sum of thirty thousand dollars (\$30,000), for cooperation with those branches of the United States Geological Survey engaged in this work. This appropriation, however, shall be contingent upon, and not become available unless the United States government apportion an equal amount to be expended for similar purposes within the state. The board of geological survey is hereby authorized and directed to enter into such agreements with the director of the United States Geological Survey as will insure that the said surveys and investigations be carried on in the most economical manner, and that the maps and data be available for the use of the public as quickly as possible.

Sec. 2. In order to enable the board of geological survey to carry on investigations authorized by law, there is hereby appropriated the sum of twenty

thousand dollars (\$20,000) for the use of said board in the geological and other investigations provided for in chapter 165 of the Session Laws of the State of Washington for 1901, and as amended in chapter 157 of the Session Laws of 1903.

Sec. 3. In order to carry out the purposes of this act, all persons employed hereunder are authorized to enter and cross all lands within the state: Provided, That in so doing no damage is done to private property.

Sec. 4. The sum of fifty thousand dollars (\$50,000) herein appropriated for the purposes specified in this act shall be available in the following manner: One-half during the first twelve months after this act takes effect, and the unexpended balance during the second twelve months after this act takes effect.

REPORT FOR 1917-19.

ORGANIZATION.

The State Board of Geological Survey consists of the following members: Governor Ernest Lister, President; Lieutenant Governor Louis F. Hart, Vice-President; State Treasurer W. W. Sherman, Secretary; President Henry Suzzallo, of the State University; and President Ernest O. Holland, of the State College. The State Geologist is Professor Henry Landes, who has his office at University Station, Seattle. In the cooperative work with the United States Geological Survey the Director of that organization is represented by George R. Davis, Geographer in Charge, Northwestern Division, and Glen L. Parker, District Engineer, 406 Federal Building, Tacoma.

TOPOGRAPHIC SURVEYS.

The accompanying progress map indicates the location of the quadrangles surveyed during this biennium, as well as from 1909 to 1917. Since the former date the cost of making the topographic surveys has been shared equally by the State Geological Survey and the United States Geological Survey, although the cost of printing and engraving is entirely assumed by the latter organization. In selecting quadrangles for survey it has been the general policy to choose those areas where the demand for the maps is very great and where they are most likely to be used in the development of the state.

During the field seasons of 1917 and 1918 the areas to be topographically surveyed and mapped were chosen by the United States Department of War. The quadrangles selected embraced strategic localities, thus far unsurveyed, which were of importance for the purposes of defense in time of war. Six fifteen-minute quadrangles were entirely surveyed, as follows: Samish Lake, Van Zandt, Wickersham, Port Angeles, Port Crescent, and Crescent Lake.

Copies of all engraved topographic maps may be purchased of the United States Geological Survey, Washington, D. C., at ten cents each, or at six cents each in lots of one hundred or more.

HYDROMETRIC SURVEYS.

The water resources of the state have been investigated jointly by the federal and state surveys, each party contributing equal sums. The work is directed from a district office of the federal Survey, located in the Federal Building at Tacoma. In addition the federal Survey maintains gaging stations on Indian reserves, the cost of which is borne by the United States Office of Indian Affairs. It also cooperates with the United States Reclamation Service, and the United States Forest Service in collecting and publishing stream flow data. The funds for carrying on stream gaging work are not sufficient to meet the

demand for such work, so that power companies, irrigation districts, cities, and individuals have contributed services of employees, instruments, material, equipment, and other help. The cost of hydrometric work carried on in the state during the present biennium is shown in the following table, the value of all services and other assistance rendered by cooperating parties being estimated when not known definitely:

**ESTIMATED COST OF WATER RESOURCES INVESTIGATIONS IN THE STATE
FOR THE BIENNIUM ENDING MARCH 31, 1919.**

State Board of Geological Survey.....	\$14,000
United States Geological Survey, gaging streams, power reports and publishing water supply papers.....	\$15,780
United States Office of Indian Affairs.....	6,580
United States Reclamation Service.....	6,200
United States Forest Service.....	1,090
District Office rent furnished in Federal Building at Tacoma..	1,800
Combined Federal	31,450
Power companies, irrigation districts, municipalities and individuals...	12,500
Total.....	\$58,250

Cooperation with the British Columbia Hydrometric Survey was continued. Gaging stations are maintained jointly on Pend Oreille River or Clark Fork at Metaline Falls and on Columbia River at Trail, B. C. Joint activity is proposed in establishing and maintaining gaging stations on all important streams crossing the international boundary between Washington and British Columbia.

The chief object of hydrometric surveys is to obtain accurate information regarding the amount of water that can be depended upon for irrigation and for power purposes. All of the water that can be secured by storage that is tributary to arid Washington will soon be needed for irrigation. The rapid industrial development of western Washington demands increasing use of the available water power. The detailed investigations have been along two lines, viz.: establishment and maintenance of gaging stations, and a series of reports summarizing power possibilities of the Cascade Range.

Gaging Stations.—As shown on the progress map, gaging stations have been maintained upon the principal streams of the state. Measurements of flow are made frequently and daily records indicating height of water on substantially set gages are kept by local observers or by means of several types of water stage recorders driven by clock mechanism, which give continuous record of water elevations. Measurements of flow and gage height records form the basis of computing average amount of water flowing each day of the year. The discharge of any stream varies considerably from day to day, season to season, and year to year, so that records for a series of years are necessary for properly designing hydraulic works. The records are particularly important during low water periods which occur on some streams in the early fall and on others in mid-winter. Stream gaging results were obtained at 97 gaging stations during the biennium, of which 44 are equipped with automatic recording instruments. A description of each gaging station, results of measurements, computed daily discharge and summary of monthly discharge are published annually by the United States Geological Survey in water supply papers. A sample of data published is given below for the year ending September 30, 1918.

PEND OREILLE RIVER, OR CLARK FORK, AT METALINE FALLS, WASH.

Location.—In SE. $\frac{1}{4}$, Sec. 21, T. 39 N., R. 43 E., about three-eighths mile above Metaline Falls, opposite town of Metaline Falls, in Pend Oreille County, 11 miles above the international boundary. Elevation 1,970 feet.

Drainage Area.—25,600 square miles (measured on General Land Office maps).

Records Available.—At Priest River, Idaho, June 26, 1903, to April 30, 1905. At Newport, Washington, June 26, 1903, to December 31, 1910. At Metaline Falls, Washington, November 4, 1908, to September 4, 1910 (gage heights only; data insufficient for determination of discharge); October 1, 1912, to September 30, 1918.

Gage.—Vertical and inclined staff, in five sections, reading from 0 to 55 feet, on right bank, three-eighths mile above the falls; installed December 10, 1916. Previous gages at Metaline Falls as follows: November 4, 1908, to September 4, 1910, on right bank about three-fourths mile above the falls; October 1 to December 27, 1912, on right bank just below Sullivan Creek, 500 feet above the falls; January 16, 1913, to January 24, 1914, at same site but at different datum; January 25 to February 2, 1914, temporary gage at different datum; February 12, 1914, to December 9, 1916, vertical and inclined staff, in five sections, reading from 0 to 54 feet, on right bank 500 feet above the falls and at different datum. All readings from October 1, 1912, to February 2, 1914, reduced to datum of gage installed February 12, 1914. Gage read by M. C. Helmer, W. A. Snure, and C. N. West.

Discharge Measurements.—Made from cable three-eighths mile above the falls. Flow of Sullivan Creek added to flow measured at cable.

Channel and Control.—Banks high and not subject to overflow. Sensitive and practically permanent control formed by Metaline Falls, where water surface drops 20 feet in a distance of 1,200 feet.

Extremes of Discharge.—Maximum stage recorded during year, 31.55 feet June 24 (discharge, 99,100 second-feet); minimum stage recorded, 2.98 feet November 26 (discharge, 9,040 second-feet).

1903-1910 and 1912-1918: Maximum stage recorded, 21.7 feet, at Newport, Washington, June 16-19, 1908 (discharge, 155,000 second-feet); minimum stage recorded, 41.12 feet, at Priest River, Idaho, January 13, 1905 (discharge, 5,700 second-feet).

Ice.—Stage-discharge relation not affected by ice.

Diversions.—Numerous small diversions from upper tributaries for irrigation.

Accuracy.—Stage-discharge relation for low and medium stages changed January 6, 1918, when slide occurred. Rating curve used before and after the change well defined. Gage read to half-tenths once daily. No diurnal fluctuation. Daily discharge ascertained by applying daily gage height to rating table. Records for the year excellent.

Cooperation.—Station maintained in cooperation with British Columbia Hydrometric Survey. Gage-height record furnished by Hugh L. Cooper Company.

**DISCHARGE MEASUREMENTS OF PEND OREILLE RIVER, OR CLARK FORK,
AT METALINE FALLS, WASH., DURING THE YEAR ENDING
SEPTEMBER 30, 1918.**

Date	Made by	Gage Height	Discharge
		Feet	Sec.-Ft.
May 2	R. B. Kilgore.....	18.90	43.400
May 4	R. B. Kilgore.....	19.90	46.300
July 1	L. D. Carson.....	29.25	80.300
July 2	L. D. Carson.....	28.75	85.400

**DAILY DISCHARGE, IN SECOND-FEET, OF PEND OREILLE RIVER, OR
CLARK FORK, AT METALINE FALLS, WASH., FOR THE
YEAR ENDING SEPTEMBER 30, 1918.**

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.
1....	11,700	9,800	9,210	24,700	23,200	17,000	21,400	41,900	63,600	88,100	28,800	16,400
2....	11,700	9,800	9,070	28,600	21,900	17,000	22,800	43,100	62,700	85,800	28,100	16,600
3....	11,500	9,950	9,070	32,200	21,000	16,800	23,600	44,100	61,900	82,600	26,200	16,900
4....	11,700	9,050	9,070	35,100	20,400	16,400	23,900	46,400	61,400	79,200	25,700	15,900
5....	11,700	9,950	9,070	36,800	20,200	15,800	24,100	47,800	60,900	76,800	25,500	15,500
6....	11,700	9,800	9,210	38,500	20,000	15,800	24,100	50,900	60,400	74,500	25,000	15,100
7....	11,500	9,650	9,210	36,000	20,200	15,500	24,600	54,400	60,900	71,300	24,600	14,400
8....	11,500	9,650	9,210	37,100	19,800	15,500	24,800	58,200	60,900	68,600	23,900	14,600
9....	11,500	9,650	9,210	36,800	20,200	15,500	25,200	62,700	62,700	66,800	23,200	14,200
10....	11,400	9,650	9,210	37,400	20,200	15,300	25,500	65,400	64,000	63,200	22,500	14,000
11....	11,200	9,650	9,210	36,800	20,400	15,100	25,700	67,200	66,300	60,000	22,300	13,700
12....	11,200	9,650	9,210	36,600	20,400	15,100	26,400	68,600	69,500	58,200	22,100	13,500
13....	11,200	9,650	9,350	35,500	20,600	14,900	27,400	69,000	73,600	55,700	21,600	13,300
14....	11,200	9,650	9,350	34,600	20,200	15,100	28,400	69,900	78,200	53,600	21,300	13,000
15....	10,900	9,650	9,350	33,300	20,600	15,100	29,300	71,800	81,100	51,600	21,000	12,400
16....	10,900	9,650	9,500	32,800	20,200	15,100	30,000	71,800	84,800	50,000	20,200	12,700
17....	10,600	9,350	9,650	32,300	20,000	14,900	31,300	72,700	88,600	47,500	19,800	12,500
18....	10,600	9,350	9,950	31,800	19,800	15,100	32,000	73,600	92,400	45,700	19,400	12,300
19....	10,400	9,210	10,100	30,800	19,400	15,300	32,800	74,500	94,300	40,600	19,000	12,000
20....	10,200	9,070	10,400	30,000	18,200	15,500	33,300	75,000	96,200	42,200	19,000	12,000
21....	10,200	9,070	10,900	29,300	16,200	15,100	33,300	75,500	98,200	40,600	18,800	11,900
22....	10,200	9,070	11,400	28,400	16,000	15,600	34,100	75,500	98,200	39,100	18,600	11,700
23....	10,100	9,070	12,400	27,900	16,800	15,000	34,600	74,500	98,600	38,000	18,400	11,500
24....	9,950	9,070	13,400	27,400	16,600	16,000	35,000	73,600	99,100	36,800	18,200	11,300
25....	9,800	9,070	14,500	26,900	16,200	16,800	36,000	72,700	96,200	35,700	18,000	11,300
26....	9,650	9,070	15,800	26,200	15,500	17,600	37,700	71,800	97,200	34,400	17,800	11,000
27....	9,650	9,070	16,600	25,000	16,200	18,200	38,600	70,900	96,200	33,600	17,400	11,000
28....	9,650	9,070	17,000	25,200	17,000	18,600	39,400	69,000	94,300	32,900	17,400	11,000
29....	9,650	9,070	17,900	24,600	.....	19,400	40,300	68,100	92,800	31,500	17,000	11,000
30....	9,650	9,070	19,500	24,600	.....	20,400	41,200	66,300	90,500	30,500	17,000	11,000
31....	9,800	.....	21,500	24,600	.....	21,000	.....	64,500	.....	29,800	16,800	.....

**MONTHLY DISCHARGE OF PEND OREILLE RIVER, OR CLARK FORK, AT
METALINE FALLS, WASH., FOR THE YEAR ENDING
SEPTEMBER 30, 1918.**

MONTH	DISCHARGE IN SECOND-FOOT			Run-Off (Total acre-feet)
	Maximum	Minimum	Mean	
October.....	11,700	9,650	10,700	658,000
November.....	9,650	9,070	9,450	562,000
December.....	21,500	9,070	11,600	713,000
January.....	38,500	24,600	31,300	1,920,000
February.....	23,200	15,500	19,200	1,070,000
March.....	21,000	14,900	16,300	1,000,000
April.....	41,200	21,400	30,300	1,800,000
May.....	75,500	41,900	64,900	3,990,000
June.....	99,100	60,400	80,300	4,780,000
July.....	88,100	29,800	53,000	3,200,000
August.....	28,800	16,800	21,100	1,300,000
September.....	16,800	11,000	13,100	780,000
The Year.....	99,100	9,070	30,200	21,800,000

**SUMMARY OF RECORDS OF PEND OREILLE RIVER, OR CLARK FORK, AT
NEWPORT AND METALINE FALLS, WASH., FOR THE YEARS
ENDING SEPTEMBER 30, 1903-1918.**

Location.—In town of Newport and opposite town of Metaline Falls, in Pend Oreille County.

Drainage area.—At Newport, 24,000 square miles; at Metaline Falls, 25,600 square miles.

Records available.—At Newport, June 26, 1903, to December 31, 1910; record June 26, 1903, to April 30, 1905, based on record of Pend Oreille River at Priest River, Idaho. At Metaline Falls, October 1, 1912, to September 30, 1918.

Winter flow.—At Newport, river usually frozen over during December, January, and February; winter records complete 1903 to 1906 (based on record of flow at Priest River, Idaho); uncertain on account of ice 1907 to 1910. At Metaline Falls stage-discharge relation not affected by ice; winter records complete.

DISCHARGE IN SECOND- FEET						Run-Off (Total in acre-feet)
YEAR	Maximum Day	Minimum			Mean	
		Day	Calendar Month			
			Mean	Month		
1903(a).....	(126,000)	(14,300)	(15,800)	September...	(44,000)	(8,500,000)
1903-4.....	98,000	9,900	11,000	February....	30,000	21,800,000
1904-5.....	50,400	5,700	7,320	February....	15,300	11,100,000
1905-6.....	43,400	7,100	7,500	January.....	16,900	12,200,000
1906-7.....	104,000	(b)	8,610	October.....	34,000	25,000,000
1907-8.....	155,000	(b)	7,410	February....	30,200	21,900,000
1908-9.....	122,000	(b)	9,910	December....	27,200	19,700,000
1909-10.....	94,800	9,470	10,000	September....	29,500	21,300,000
1910-11(a).....	(20,800)	(8,900)	(10,200)	October.....	(13,800)	(2,520,000)
1912-13.....	139,000	(c)	11,100	February (d)	(e)	.....
1913-14.....	70,100	7,800	10,500	February....	24,400	17,700,000
1914-15.....	44,000	8,700	9,680	February....	21,200	15,300,000
1915-16.....	133,000	6,960	8,540	January.....	38,200	27,700,000
1916-17.....	122,000	5,960	9,490	January.....	32,400	23,400,000
1917-18.....	99,100	9,070	9,450	November...	30,200	21,900,000
Period.....	(f) 155,000	(f) 5,700	(f) 7,320	.....	(g) 27,500	(g) 19,900,000

(a) Values in parentheses are for a partial year.

(b) Minimum daily discharge may have occurred during winter months during which record is uncertain on account of ice.

(c) Minimum may have occurred during break in record from December 28 to January 15.

(d) Mean January 16-31 also 11,100 second-feet. No record January 1-15.

(e) Mean discharge for year not computed as record was broken December 28 to January 15.

(f) Maximum (or minimum) value during the separate periods.

(g) Average of values for the twelve complete years.

NOTE.—This summary is not published in the water-supply papers but is included in this report to condense the records of previous years. More detailed information concerning these records may be found in water-supply papers 252, 272, 292, 302, 362, 392, 412, 442, and 462.

Cascade Power Reports.—Through cooperative arrangements with the State Board of Geological Survey in 1909, the federal Survey adopted its first comprehensive plan for giving the public accurate data concerning water power resources. More recently similar work has been instituted in Oregon. Progress has been hampered considerably due to lack of sufficient base data and need

of continuing stream flow observations over a series of years in order to insure dependable estimates of water supply. Surveys have been run along portions of the larger streams in the Cascade Range. Reservoir sites which appear to offer favorable storage opportunities for increasing low water flow have been surveyed and a large mass of information bearing upon feasibility of hydro-electric projects has been collected.

The scheme followed in analyzing power resources of the Cascades consists of assembling estimates for a group of streams within a relatively small section of the range. It is proposed to publish the estimates in a series of seven reports as water supply papers of the United States Geological Survey. The areas to be covered in the seven units are shown on the progress map attached.

The first report is Water Supply Paper 253 and is entitled "Water Powers of the Cascade Range, Part I, Southern Washington." The power possibilities of Klickitat, White Salmon, Little White Salmon, Lewis and Toutle Rivers are summarized.

The second report is Water Supply Paper 313 and is entitled "Water Powers of the Cascade Range, Part II." The power possibilities of Cowlitz, Nisqually, Puyallup, White, Cedar and Green rivers are summarized. This report also includes a discussion of hydroelectric market conditions in Puget Sound region.

The third report is Water Supply Paper 369 and is entitled "Water Powers of the Cascade Range, Part III, Yakima Basin." The summaries were more difficult to compile than for any of the series on account of the necessity of taking into consideration ultimate use of stored water for irrigation in Yakima Valley.

The fourth report, which will be published shortly, is Water Supply Paper 486 and is entitled "Water Power of the Cascade Range, Part IV, Wenatchee and Entiat Basins." The water power resources in Wenatchee basin with and without the proposed Quincy Valley irrigation scheme in operation are discussed and water supply available for the Quincy project through utilizing storage in Wenatchee Lake reservoir is shown.

The fifth report, not finished, will be published as Water Supply Paper 487, and will be entitled "Water Power of the Cascade Range, Part V, Chelan, Methow and Similkameen Basins."

All of the field data have been collected for the fifth unit and considerable work has been done toward compiling the data.

Practically all of the surveys have been completed for the sixth and seventh units, and most of the field reconnaissance for the sixth unit has been finished. Gaging stations are being maintained in each to determine the available water supply.

GEOLOGICAL SURVEYS.

Investigations of war minerals. From the time of the entry of our country into the great war until the signing of the armistice, thoroughgoing investigations were made throughout the United States for all minerals of value for war purposes. In Washington the men employed on the Geological Survey visited nearly all parts of the state where such minerals had been reported or where they could probably be found. The principal war minerals that were sought for in Washington were manganese, chrome, tungsten, molybdenum, platinum, and quick-silver. In order to avoid duplication and reduce ex-

MINERAL PRODUCTION OF WASHINGTON FROM 1907 TO 1916, INCLUSIVE (a).

	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916
NON-METALLIC PRODUCTS										
Coal.....	\$7,679,801	\$6,690,412	\$9,153,999	\$9,764,465	\$8,174,170	\$8,042,871	\$9,243,137	\$6,751,511	\$5,276,299	\$6,907,428
Clay products.....	1,921,684	2,104,289	3,060,486	3,023,854	2,861,758	2,838,870	2,370,235	1,869,491	1,460,061	6,251
Portland cement.....	(b) 214,500	(b) 396,000	767,195	1,031,704	1,496,807	2,012,785	2,853,290	1,870,078	1,790,499	2,245,027
Granite.....	562,352	870,944	742,878	642,992	1,345,551	809,201	.....	72,079	290,688	90,525
Basalt.....	.....	.....	.....	.....	.....	.....	(c) 632,915	1,068,042	1,452,869	754,831
Sandstone.....	295,585	464,587	335,470	438,581	301,843	344,476	560,468	450,436	33,710	27,791
Limestone.....	62,317	31,660	38,299	36,186	32,478	20,370	62,913	10,585	11,550	30,338
Marble.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	150
Lime.....	238,568	228,353	282,628	267,735	228,933	234,882	219,103	178,945	180,290	166,653
Magnesite.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,392
Mineral waters.....	10,820	13,650	15,968	12,571	14,654	17,542	18,834	28,777	11,703	9,476
Sand and gravel.....	179,800	261,531	423,425	431,569	319,760	345,289	395,896	324,628	211,490	387,337
Diatomaceous earth.....	.....	.....	.....	.....	.....	.....	.....	.....	14,515	10,700
Totals.....	\$11,165,677	\$11,061,426	\$14,825,306	\$15,699,657	\$14,775,954	\$14,216,236	\$16,507,081	\$12,564,572	\$10,712,624	\$10,641,869
METALLIC PRODUCTS										
Gold.....	\$292,300	\$253,700	\$392,051	\$788,145	\$847,677	\$690,844	\$696,275	\$657,173	\$391,419	\$577,655
Silver.....	55,400	46,400	41,334	110,886	129,204	254,336	200,068	146,468	129,769	229,510
Copper.....	24,453	21,411	33,767	39,776	39,776	179,192	147,863	103,571	176,692	650,675
Lead.....	29,786	32,844	12,414	58,190	38,186	5,732	8,909	2,556	13,875	372,550
Totals.....	\$371,939	\$354,355	\$448,986	\$968,249	\$1,066,017	\$1,120,214	\$1,053,185	\$899,767	\$713,665	\$1,821,390
Grand Totals.....	\$11,537,616	\$11,415,781	\$15,274,274	\$16,667,906	\$15,681,971	\$15,336,450	\$17,560,216	\$13,374,339	\$11,426,289	\$12,463,259

(a) Compiled from Mineral Resources U. S. Geological Survey.

(b) Approximate production.

(c) Heretofore included in granite totals.

Mineral Resources.—The State Geological Survey, since 1911, has cooperated with the United States Geological Survey in the collection of statistics regarding the mineral production of Washington. It is a matter of great importance to the state that such statistics be secured covering accurately the entire mineral output, because of the bearing this must have upon the establishment of industrial enterprises. The accompanying table gives a summary of the principal mineral products of Washington for the ten-year period from 1908 to 1917, inclusive. While the production is already large, and constantly growing, it is capable of a very much greater extension when the economic minerals are investigated and made better known.

The statistics covering the mineral resources of the state should be published annually. The report for 1912, known as "Bulletin 11," gives a description of the principal localities where different mineral products are obtained, with a list of producers and a statement covering the output. This bulletin was accompanied by an outline map of the state wherein, by a system of symbols and colors, all varieties of mineral products were shown in the localities where they are obtained. In the continuation of this plan Bulletin 21 is about ready for the printer, giving an account of the mineral production in all parts of the state, with statistics in detail for 1917. The map in colors to accompany this bulletin has already been engraved and printed and is now ready for distribution.

Office Work.—The office work of the Geological Survey becomes increasingly heavy from year to year. Constant inquiries come to the office in regard to the mineral resources of every portion of the state. Prospective settlers and others are very desirous of accurate information regarding the climatic and soil conditions of those regions in which they may plan to make their homes. Manufacturers are desirous before coming to Washington of knowing the nature of the fuel supply and the variety of crude materials of a mineral character which may be obtained for manufacturing purposes. On the whole the work of the State Geological Survey is carried on at a minimum of expense because a very large part of the work, especially the office work, is done by men who do not receive any compensation for that purpose out of the funds of the Survey.

FINANCIAL STATEMENT.

TOPOGRAPHIC AND HYDROMETRIC SURVEYS.

U. S. Geological Survey:

Allotment for cooperation 1917-19.....	\$35,000 00
Expenditures to November 30, 1918.....	29,191 32
Balance on December 1, 1918.....	\$5,808 68

State Geological Survey:

Appropriation for cooperation 1917-19.....	\$35,000 00
Expenditures to November 30, 1918.....	26,371 01
Balance on December 1, 1918.....	\$8,628 99

GEOLOGICAL SURVEYS.

Investigations and Surveys:

Appropriation for 1917-19.....	\$5,700 00
Expenditures to November 30, 1918.....	5,614 27
Balance on December 1, 1918.....	\$85 73

Supplies, Materials and Service:

Appropriation for 1917-19.....	\$7,400 00
Expenditures to November 30, 1918.....	3,268 53
Balance on December 1, 1918.....	\$4,132 47

Salaries and Wages:

Appropriation for 1917-19.....	\$6,900 00
Expenditures to November 30, 1918.....	5,304 22
Balance on December 1, 1918.....	\$1,595 78

RECOMMENDATIONS.**APPROPRIATIONS REQUESTED.**

For topographic and hydrometric surveys (conditioned upon a similar sum being expended in the state by the United States Geological Survey)	\$35,000
For Geological Surveys.....	20,000

TOPOGRAPHIC SURVEYS.

For some time the greatest demand for topographic surveys has come from the arid and semi-arid regions of the state where the land may be put to its greatest use only by irrigation, and where topographic maps are invaluable for engineering work of this character. Such maps are also requested in those portions of Washington where the country is being rapidly settled, and in certain mountainous areas where large water-power projects are under consideration. Urgent requests are now on file for topographic surveys of Asotin, Eatonville, Fort Simcoe, Othello, Olympia, Pomeroy, Sultan and Yakima quadrangles. In preparation for large irrigation projects now contemplated in central Washington topographic maps should at once be made of Adams, Franklin, Grant and Lincoln counties.

In the past eight years level lines or profiles have been run along all the streams of the Cascade Mountains, except the three forks of the Nooksak River. This has been done as a necessary part of the problem of determining with accuracy the total hydro-electric power of the rivers of the Cascades. In the next biennium the Nooksak River should be surveyed, and river profiles begun on the streams of the Olympic Mountains. When the latter are completed it will then be possible to publish detailed reports on the water power resources of the entire state.

HYDROMETRIC SURVEYS.

As indicated on the progress map accompanying this report, gaging stations are maintained on a large number of the rivers where information is very necessary as to the total amount of water available for municipal supplies, irrigation and power. The number of stations should be increased rather than diminished. Each added year of gaging at any station makes the records that much more valuable. The demand for accurate information regarding our water resources grows stronger with each biennium. It is recommended that the usual appropriation for this work be made so that cooperation with the Federal Government may be continued.

GEOLOGICAL SURVEYS.

The sum of twenty thousand dollars, the same amount as appropriated by the legislature of 1909, 1911, 1913 and 1917, is requested for geological surveys, in order that certain lines of work now under way may be completed and some important new work undertaken.

Uncompleted Reports. The close of each biennium will always find a number of investigations and surveys partially completed, and additional time and money will be necessary in order to complete and publish the reports. Bulletin 20, on the mineral resources of Stevens County, is ready for the printer but not enough money is available under the present appropriation to run it through the press. It can be printed and distributed whenever the new appropriation is available. The field work has been completed, and the manuscript partly prepared, for a report upon the coal fields of Whatcom and Skagit counties. A large amount of valuable information regarding deposits of minerals of economic value is about ready to be issued in printed form.

Soil Surveys.—In past years soil surveys have been made of nearly all the logged-off lands of western Washington, besides similar surveys and reports upon the Quincy Valley country, Stevens, Spokane and Franklin counties, in eastern Washington. In all soil surveys cooperation has been afforded by the United States Bureau of Soils, the Federal Bureau usually assuming about three-fifths of the expense of the field work besides all the cost of printing. The reports of the soil surveys have been in large demand from the agriculturists, commercial bodies, prospective settlers, county assessors, and all others who desire to know the facts about the soil conditions in various parts of the state. At the present time requests are on file for soil surveys in various sections of Washington where this work has not been done.

Surveys of Metal Mining Districts.—In addition to the detailed surveys already made of the best known districts, there are many requests for reconnaissance surveys of the scattered mining sections, whereby the varieties of bed-rock, the important minerals, and the character of the ore deposits may be determined and described. For the next biennium surveys of the mining districts in Ferry, Pend Oreille and Okanogan counties should be made. Such surveys are of very great service to the mining men who are giving their time and money to the development of one of the state's resources. It is of great value to the miner, as well as to the investor, and to the state at large, that the truth in regard to the quality and quantity of the ore bodies should be made known.

Report on Mineral Industries.—Any information bearing upon the production of different minerals in different counties and other portions of the state is always in much demand. It seems necessary to keep this information in such form that it may be given out regularly and be revised as often as desirable. At least once a year reports and maps should be issued which set forth the localities where different mineral products may be obtained, along with the names of all producers, and with accurate statistics in regard to the output of each particular mineral concerned. Such information is very greatly desired by manufacturers and others who have occasion to use in any way whatsoever those minerals that are of economic importance.

Topographical Map.—There is constant inquiry for a map which will show by a system of contours, or by a series of lines, the elevations of various portions of the state. By utilizing the base map which has already been prepared, and by compiling the data regarding elevations throughout the state, it will be possible to prepare a map which will give the information most needed. Such a map should be printed in colors, the black referring to culture, the blue giving the water bodies, and a series of brown shades or tints which will give the variation in elevation from sea level to the tops of the highest mountains.

Geological Map.—More requests have come for a geological map of the state than for any other one thing. With the base map now available it is desirable that the boundaries of the different geological formations should be entered thereon and a complete geological map of the state be prepared as early as possible. This has been very generally done by other states and Washington will be one of the last to prepare such a map. The cost of preparation of such a map is not excessive, and its value to our citizens generally would repay the cost many fold.

PUBLICATIONS
OF THE
WASHINGTON GEOLOGICAL SURVEY

ADDRESS
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Volume 1.—Annual Report for 1901. Part 1, Creation of the State Geological Survey, and An Outline of the Geology of Washington, by Henry Landes; part 2, The Metalliferous Resources of Washington, Except Iron, by Henry Landes, William S. Thyng, D. A. Lyon and Milnor Roberts; part 3, The Non-Metalliferous Resources of Washington, Except Coal, by Henry Landes; part 4, The Iron Ores of Washington, by S. Shedd, and the Coal Deposits of Washington, by Henry Landes; part 5, The Water Resources of Washington, by H. G. Byers, C. A. Ruddy and R. E. Heine; part 6, Bibliography of the Literature Referring to the Geology of Washington, by Ralph Arnold. Out of print.

Volume 2.—Annual Report for 1902. Part 1, The Building and Ornamental Stones of Washington, by S. Shedd; part 2, The Coal Deposits of Washington, by Henry Landes and C. A. Ruddy. Out of print.

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GEOLOGICAL SURVEY.

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Topographic Maps of the Following Quadrangles.

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Water-Supply Paper No. 369: Water Powers of the Cascade Range. Part III, Yakima basin.

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Annual Stream-Flow Reports.

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Water-Supply Paper No. 340: Gaging stations and publications on water resources 1885-1913.

Water-Supply Paper No. 362: Surface Water Supply of the United States, North Pacific Coast, 1913.

Water-Supply Papers Nos. 392, 393, and 394: Surface Water Supply of the United States, North Pacific Coast, 1914.

Water-Supply Papers Nos. 412, 413, and 414: Surface Water Supply of the United States, North Pacific Coast, 1915.

Water-Supply Papers Nos. 442, 443, and 444: Surface Water Supply of the United States, North Pacific Coast, 1916. Government Printing Office.

Water-Supply Papers Nos. 462, 463, and 464: Surface Water Supply of the United States, North Pacific Coast, 1917. Completed for publication.

Water-Supply Papers Nos. 482, 483, and 484: Surface Water Supply of the United States, North Pacific Coast, 1918. In preparation.

Qualitative Report.

(Principally in cooperation with State Board of Health.)

Water-Supply Paper No. 339: Quality of Surface Waters of Washington.

**PUBLICATIONS OF THE U. S. DEPARTMENT OF AGRICULTURE,
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Reconnaissance Soil Survey of the Eastern Part of Puget Sound Basin.
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Puget Sound Basin.

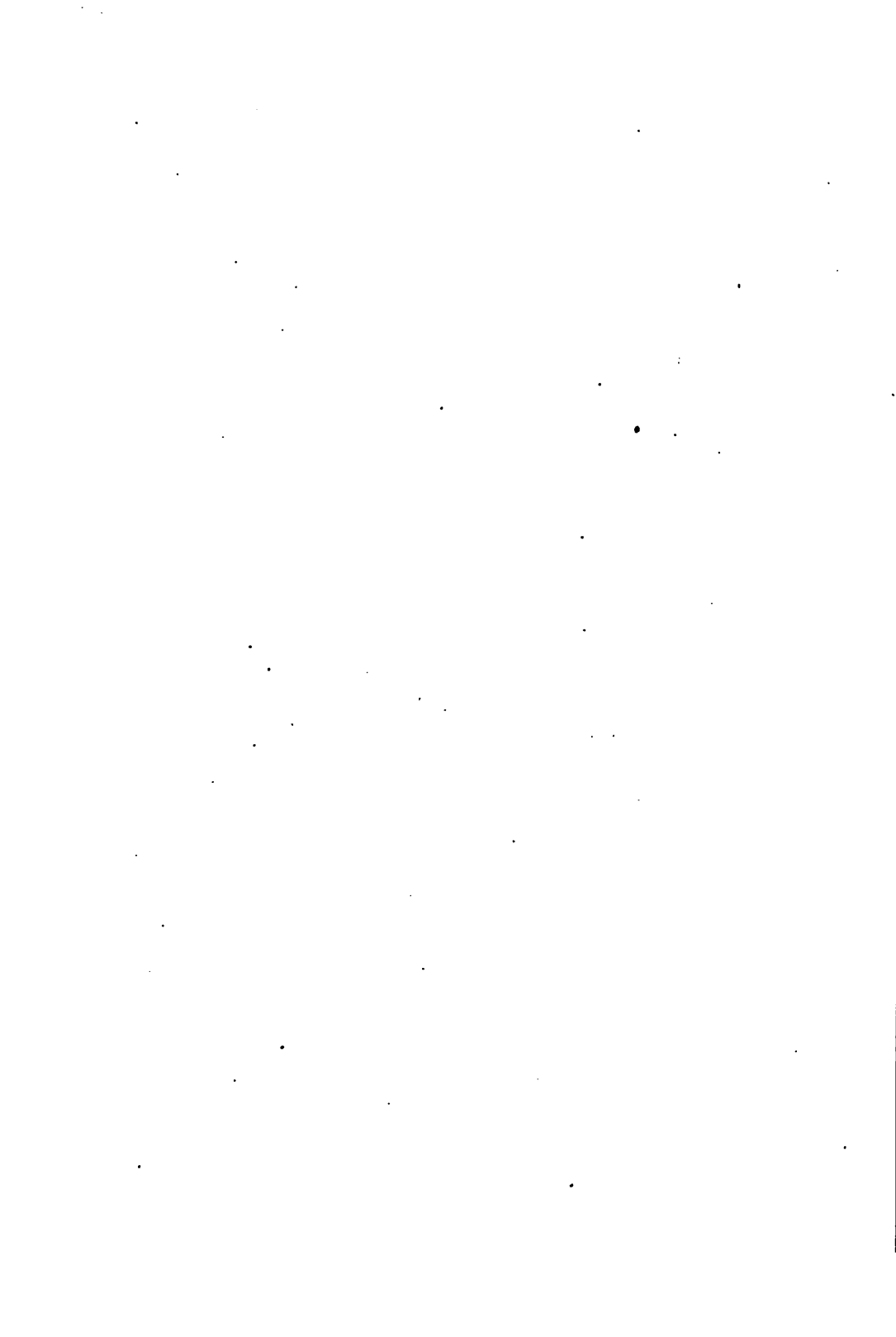
Reconnaissance Soil Survey of Southwestern Washington.

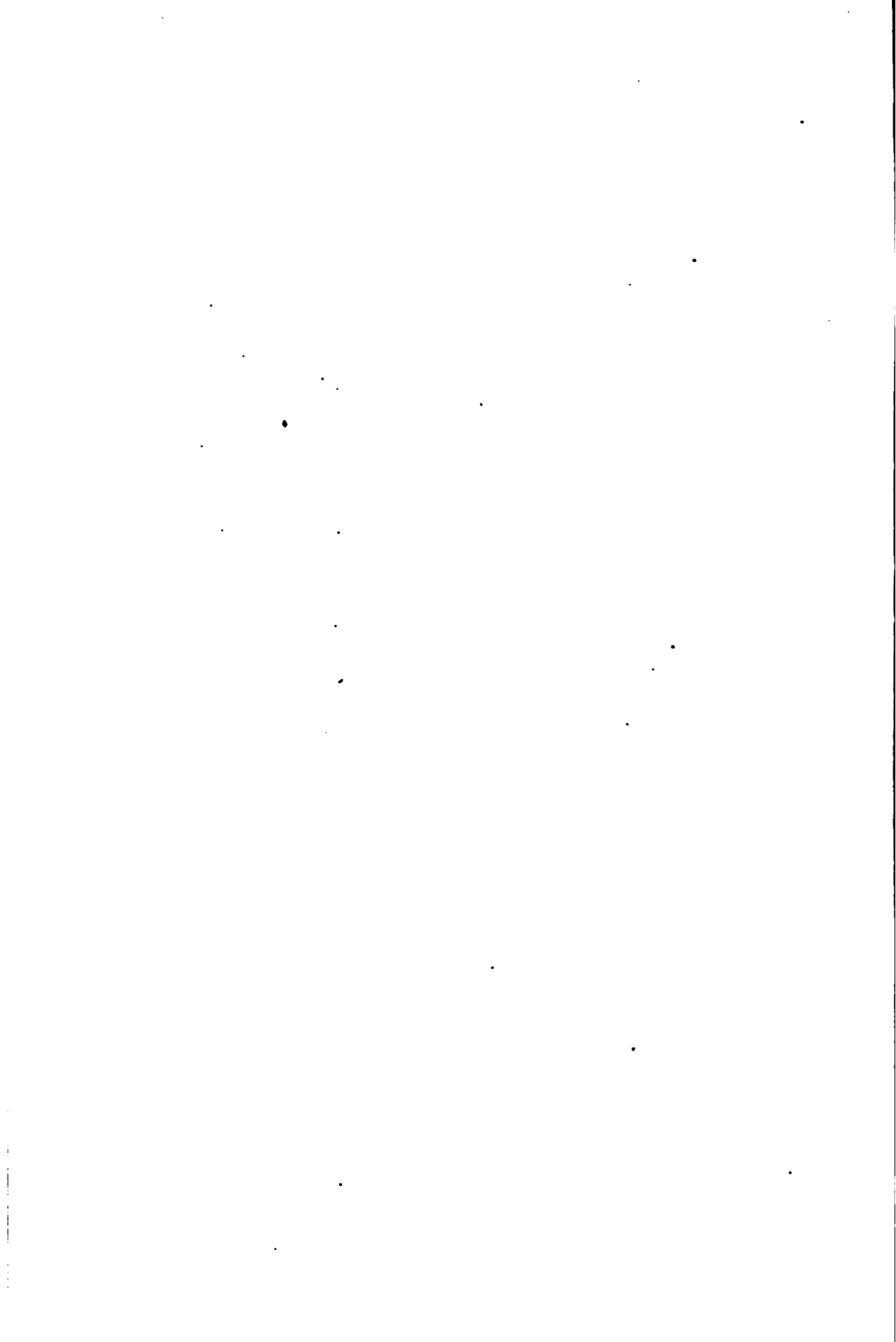
Reconnaissance Soil Survey of the Quincy Area.

Reconnaissance Soil Survey of Stevens County.

Reconnaissance Soil Survey of Franklin County.

Reconnaissance Soil Survey of Spokane County. In press.









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STATE OF WASHINGTON

TWELFTH BIENNIAL REPORT

OF THE

State Board of Health

FOR THE

Years Ending September 30, 1917, and
September 30, 1918

filed



OLYMPIA, WASH.

FRANK M. LAMBORN PUBLIC PRINTER

1919

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MEMBERSHIP OF THE BOARD

J. R. BROWN, M. D., Tacoma, President.

FRED R. HEDGES, M. D., Everett.

H. H. McCARTHY, M. D., Spokane.

MRS. R. C. McCREDIE, Sunnyside.

E. F. BENSON, Commissioner of Agriculture, Olympia.

**THOMAS D. TUTTLE, M. D., Seattle, Commissioner and Ex-Officio
Secretary and State Registrar.**

tailed report of the activities of the State Board of Health covering the first six months of the year 1918. A committee was appointed to pass on tuberculosis sites and plans. A committee was appointed to prepare a budget for the two years 1919-1921. A committee was appointed to pass upon such legislation as the State Board of Health might present to the coming legislature. A special regulation was passed at this meeting to meet emergency conditions in the territory immediately adjacent to the city of Cle Elum, relative to the establishment of tents, camps or other places of temporary abode within two miles of the corporate limits of the city of Cle Elum. The Board approved the recommendation that the State Laboratory be moved from its present location to the State University grounds, where special space had been donated.

A special meeting of the State Board of Health was held at Spokane, September 28th, 1918. At this meeting Regulation No. 10, governing the control of smallpox in the State, was amended. It was moved and seconded that the bill to be introduced at the next session of the legislature and supported by the Women's Clubs of the State, providing for a Detention Home for Women, be supported by the State Board of Health. It was recommended that the bill, known as the Whole-time Health Officer bill, be supported by the board and its passage urged by the State Board of Health. The legislative committee was instructed to draft a bill for the creation of the office of Registrar of Vital Statistics under the State Board of Health. The report of the committee to prepare the budget for the next biennium was presented and approved. The probability of an outbreak of influenza in the State was extensively discussed and ways and means of attempting its prevention were considered.

COMMISSIONER'S REPORT

The Laboratory

At the last session of the legislature the State Board of Health, together with other departments of the State, requested that funds be provided for the proper equipment of a complete State Laboratory where all examinations for the various State Departments could be made. The legislature did not see fit to provide for such a laboratory. On the other hand, the sum of \$3,000 for the biennium was provided for a salary of bacteriologist for the State Board of Health. Shortly after the legislature adjourned the United States entered the war and the demand for laboratory workers became very acute. In addition to this fact the bacteriologist employed by the State Board of Health was a native born Austrian. The United States being at war with Austria, it became necessary to discontinue her services. Every effort was made to secure a bacteriologist at the salary provided, and for three months the State was without bacteriological services, other than that of a mediocre character. During this period Dr. G. Sherman Peterkin rendered to the State Board of Health invaluable assistance in making at his laboratory examinations that the State Board of Health was not equipped to make. These examinations were made by Dr. Peterkin without charge to the State and at his own expense as well as loss of time. It is desired at this time to publicly thank Dr. Peterkin and his laboratory staff for the services rendered in this emergency, and not only for these services but for the untiring efforts that Dr. Peterkin made in assisting the State Commissioner of Health in compiling feasible and reasonable regulations for the control of venereal diseases.

The laboratory being an absolutely essential feature of the State Board of Health, it was necessary to find some means whereby funds could be used for employing a bacteriologist. In the appropriation bill the salary of bacteriologist was not designated but was included in that of "other clerks and employees." In order to secure the services of a bacteriologist it became necessary for the State Board of Health to try to get along the best they could with one less clerk and devote the salary of such clerk to that of bacteriologist.

About this time the Government awakened to the fact that venereal diseases were proving a severe handicap in our military operations and demanded that States take active measures towards the prevention and suppression of these diseases. This necessitated a marked increase in the work of our bacteriological laboratory. The quarters provided were entirely inadequate and the laboratory not equipped for making such examinations, and no funds were provided for equipping the laboratory or enlarging its capacity. The matter was presented by the State Commissioner of Health to the State Council of Defense and said Council of Defense agreed to raise \$10,000 for the purpose of properly equipping and manning the laboratory. The University of Washington provided rooms at the University for a laboratory but it was necessary to make considerable changes in the rooms at an expense of \$943. These changes were made, but up to the present time this bill remains unpaid, the State Council of Defense having failed to raise the funds necessary to date. It was the intention of the State Commissioner of Health in equipping the laboratory, had the above mentioned funds

been raised, to be prepared to meet any emergency that might arise, but without funds such equipment could not be made and we were therefore confronted with a serious handicap at the outbreak of the epidemic of influenza. A vaccine having been discovered that proved very efficacious in this disease and resulted in Washington showing one of the lowest death rates from influenza in the United States, could not be made in our laboratory for lack of equipment, but we had to purchase such amount as the local commercial laboratories could produce, which was far below the amount demanded by the people. Such emergencies as these are apt to arise at any time and it appeals to the writer that no further argument should be necessary for the proper equipment and maintenance of a complete and efficiently manned public health laboratory.

VENEREAL DISEASES

Shortly after the military forces began to be brought together, it became apparent that venereal diseases were acting as a severe handicap to our military activities. The War Department and nation demanded immediate action on the part of the State to suppress these diseases. In November a conference of representatives from the various Northwestern States was held in the city of Tacoma, to discuss ways and means for the prevention of the spread of these diseases. Following this conference Seattle, Tacoma and Vancouver provided Intern Stations and quarantined persons suffering from venereal diseases whose occupations were such as to facilitate the spread of these diseases.

In December the State Board of Health held a meeting and declared syphilis, gonorrhea and chancroid "dangerous, infectious and contagious" diseases, and required that they be reported by the physician the same as other communicable diseases. At the regular meeting of the State Board of Health on January 4th, 1918, the following regulations relative to venereal diseases were adopted:

Venereal Diseases

Regulation 37. SYPHILIS, GONOCOCCUS AND CHANCROID INFECTION. In addition to those diseases mentioned in Regulation 1, of the rules and regulations adopted by the State Board of Health on October 4th, 1917, syphilis, gonococcus and chancroid infection are hereby declared to be "dangerous, contagious and infectious diseases," and wherever the terms "contagious, infectious or communicable" occur in any regulation made and promulgated by this board, these diseases shall be considered as referred to by such regulation or regulations.

(A) **Cases Must Be Reported.** Any person who shall treat, administer to by any means material or immaterial, or prescribe for any person suffering from syphilis, gonococcus or chancroid infection, or any person suspected of suffering from such disease, shall report such case in writing, within twenty-four hours, to the health officer in whose jurisdiction such case exists. All reports must be made in writing and on forms supplied by the State Board of Health. Cases may be reported by name, by initials or by serial number, but when reported by initials or serial number the person treating the case must keep a record of his or her cases whereby the person indicated by such initials or number may be identified.

(B) **Source of Infection.** Persons treating those suffering from any disease mentioned in Paragraph "A" must make careful inquiry as to the source of infection and when such source can be ascertained the facts pertaining thereto shall be stated in the report of the case to the health officer.

(C) **Laboratory Examinations.** Diagnosis in every instance must be confirmed by laboratory examination in a laboratory approved by the State Board of Health.

The State Board of Health will make free Wasserman and gonococcus examinations for the physicians of the State.

(D) **Health Officer Must Investigate.** All health officers must investigate wherever and whenever they have reason to suspect that a case of syphilis or gonococcus or chancroid infection exists within their jurisdiction, and such investigation shall include the submission of specimens to the laboratory for examination. Owing to the prevalence of syphilis and gonorrhoea among prostitutes, all prostitutes shall be considered as suspected of suffering from such infection and subject to examination by the health officer.

(E) **Cases Under the Care of a Physician.** Whenever a case of syphilis or gonococcus or chancroid infection is under the care of a legally qualified physician, such physician shall, in addition to reporting the case as provided in Paragraph "A" of this regulation, instruct the patient as to the communicability of the disease, that he is required by law to refrain from any act that may transmit the disease to another, and to give to such person the literature relative to such disease as shall be provided by the State Board of Health.

(F) **Cases Failing to Report for Treatment.** When any person suffering from syphilis or gonococcus or chancroid infection fails to report to the physician under whose care he or she may be, as directed by such physician, then the physician shall immediately notify the health officer in whose jurisdiction the case may be, giving the name and address of such infected person and stating the fact that he or she has failed to report as directed.

(G) **Changing Physicians.** When any person suffering from syphilis or gonococcus or chancroid infection who has been under the care of any physician goes to another physician for treatment, he or she shall tell the second physician the name and address of the physician under whose care he or she has been and, if known, the name, initials or number under which his or her case was reported to the health officer. The physician to whom such infected person applies for treatment shall immediately report the case to the health officer having jurisdiction, in the same manner as though he or she had not been treated by another physician, and in addition, he shall indicate in the space provided, the name and address of the previous attending physician, and, if known, the name, initials or serial number under which the case was reported.

(H) **Laboratory Specimens and Reports.** When specimens are submitted to a laboratory for examination for syphilis or gonococcus or chancroid infection, they must be submitted under the name, initials or serial number used in reporting the case to the health officer. When the examination is completed the laboratory shall mail to the health officer having jurisdiction a copy of the report made to the attending physician and such report shall be attached to and become a part of the report of the case on file in the health office.

(I) **Quarantine Measures.** When any person suffering from syphilis or gonococcus or chancroid infection shall fail to report to the attending physician, as directed by him, or when any such person shall expose another to infection by any means whatsoever, or when, in the opinion of the local health officer or of the State Commissioner of Health, the occupation or environment of such infected person is such as to facilitate the transmission of infection to others, then the health officer shall place such infected person in quarantine in some proper place to be designated by him, subject to the approval of the State Commissioner of Health. No person in quarantine on account of syphilis or gonococcus or chancroid infection shall leave the premises under quarantine until the quarantine shall be raised by the health officer having jurisdiction: Provided, That this paragraph shall not be construed as limiting other and more stringent measures in cities of the first class, or the right of the authorities in cities of the first class to designate the place of quarantine.

(J) **Period of Quarantine.** No person shall be released from quarantine on account of syphilis or gonococcus or chancroid infection until the health officer having jurisdiction shall have satisfied himself by physical examination and laboratory investigation and tests that the quarantined person is no longer capable of transmitting the infection: Provided, That no person shall be released from quarantine on account of gonococcus infection until at least three specimens submitted

to an approved laboratory shall have been free from gonococci, and not less than forty-eight hours shall have elapsed between the taking of any two specimens: And provided further, That no case in quarantine on account of syphilis shall be released from quarantine except with the approval of the State Commissioner of Health.

(K) **Relapsing of Reinfected Cases.** Any person who may have been released from quarantine under the provisions of paragraph "J" of this regulation who subsequently may be found to have become reinfected with either syphilis or gonorrhoea, or who may have relapsed from a previous infection with either or both of these diseases, shall be detained in quarantine in the same manner as though such infection were a primary attack of such disease or diseases.

(L) **Reports to the State Commissioner of Health.** When any case of syphilis or gonococcus or chancroid infection is reported to any city or county health officer, or when he shall receive any report from any laboratory regarding any such case, such health officer shall immediately make a correct copy of such report and forward the same to the State Commissioner of Health.

(M) **Spread of Disease Prohibited.** No person suffering from syphilis or gonococcus or chancroid infection shall inoculate any other person with such disease, nor shall any person so infected commit any act which exposes any other person to infection with either of said diseases.

(N) **Druggists to Keep Records and Make Reports.** Any druggist or other person who sells any drug, compound, specific or preparation of any kind used for or reasonably intended to be used for the cure of syphilis or gonococcus or chancroid infection shall keep a record of the name, address and sex of the person making such purchase. A copy of said record shall be mailed each week to the health officer having jurisdiction.

(O) **Occupations Prohibited.** No person afflicted with syphilis, gonococcus or chancroid infection shall be employed in the preparation, manufacture or handling of milk, milk products or other foodstuffs, nor shall any such person be engaged in the care or nursing of children or of the sick, nor shall any such person engage in any occupation the nature of which is such that their infection may be borne to others.

(P) **Certificates of Health Prohibited.** Owing to the fact that infection with syphilis or gonococcus or chancroid infection may be acquired immediately after examination, no health officer shall accept any certificate from any physician whatsoever stating that a person suspected of suffering from any disease mentioned in this regulation as evidence that such person is not so infected, nor shall any health officer, upon releasing any person from quarantine on account of either of the diseases mentioned in this regulation, give to such person a statement that he or she is free from either or any of such diseases.

(Q) **Records Inviolable.** All health officers shall take every precaution to prevent the information contained in reports of cases of syphilis or gonococcus or chancroid infection being made public, and shall refuse to permit any person to see such records or to divulge any information contained therein, except in cases provided by law.

Numerous efforts were made to have persons quarantined on account of venereal diseases, especially in the City of Seattle, released on various legal technicalities. These cases were carried through the lower courts and finally carried to the Supreme Court of the State, resulting in the following decision:

(NO. 14913, DEPARTMENT TWO. AUGUST 27, 1918)

THE STATE OF WASHINGTON, on the Relation of J. S. McBride, Plaintiff, v.
THE SUPERIOR COURT for King County, Respondent.

Health—State Board—Quarantine for Contagious Disease—Compulsory Production of Intended Person—Habeas Corpus.

Municipal Corporations—Police Power—Regulations of Health—Concurrent Exercise by State and Municipality—Conflict.

Habeas Corpus—Proceedings Reviewable—Quarantine for Disease—Order of Health Board—Finality.

Constitutional Law—Due Process—Ruling of Health Board—Quarantine for Contagious Disease.

Constitutional Law—Police Power—Preservation of Health—Interference of Courts.

Same—Delegation of Legislative Power—Health Boards—Power to Frame Regulations.

Application filed in the supreme court July 23, 1918, to prohibit the superior court of King County from releasing on habeas corpus a person detained in quarantine by order of the Boards of Health of the City of Seattle and of the State of Washington. Writ issued.

Hugh M. Caldwell, Thomas J. L. Kennedy, Walter F. Meier, and Geo. A. Meagher for relator.

Smith, Chester, Brown & Worthington for respondent.

Chadwick, J.—This case grows out of and demands a construction of the quarantine regulations of the City of Seattle and the State law creating a State Board of Health and defining its powers and duties.

On the 11th day of April, 1918, one Francis Williams was arrested charged with a violation of Ordinance No. 16,046 of the City of Seattle. On the 14th day of April Williams was given over to the health commissioner of the City for examination. The health commissioner found Williams to be afflicted with a dangerous, infectious and contagious disease known as syphilis, whereupon he was committed to the isolation hospital of the City and he has there since remained.

He appealed to the State Board of Health and the finding of the commissioner was affirmed. On July 15th, Williams petitioned this Court for a writ of habeas corpus, alleging that he was arrested, as he believes, without a warrant and without being informed against, and that he is being held on a pretended claim vexatiously instigated by some police officer that he is afflicted with some dangerous, contagious and infectious disease; that such charge is unfounded and in fact untrue; that he is not now, nor at any time during his detention has been, so affected; that, as he believes, the alleged cause of his detention is but a subterfuge in furtherance of a conspiracy on the part of the police department, aided and acquiesced in by the health department, to unjustly deprive him of his liberty; that he has been detained in unsanitary, filthy and poorly ventilated quarters crowded with inmates who are suffering from various ailments, and is forced to use the same soap and a common drinking cup; that he is fed on unwholesome food and forced to submit to arbitrary medical treatment in furtherance of the design to detain him, without the privilege of having or consulting a physician of his own selection.

Upon this showing we ordered that a writ issue returnable on the 17th day of July to the Superior court of King County for inquiry as to the time and cause of the detention of the petitioner.

The matter coming on for hearing, the petitioner asked that physicians be appointed to examine him. Superior Judge Tallman, before whom the case was called, appointed three physicians to examine the petitioner. The order was obtained ex parte and without formal notice. On the next day the city attorney petitioned Judge Dykeman, Judge Tallman then being out of the city, to vacate the order as improvidently made, contrary to the law, and without sustaining jurisdiction. Judge Dykeman having announced his intention of enforcing the order made by Judge Tallman, the health commissioner came to this court and procured an order to show cause why a writ of prohibition should not issue restraining further proceedings. We understand that all questions of procedure are waived, to the end that the issues hereinafter to be noted may be finally determined by this court.

It is alleged that Williams was arrested and is detained as a disorderly person under the provisions of Ordinance No. 16,046, "an ordinance for the preservation of the public morality, peace, safety and good order of the City of Seattle, etc."

That he is now held under the provisions of Ordinance No. 15,957 and Ordinance No. 32,444. In the latter ordinance it is provided that:

"Whereas, by reason of investigations made by the Sanitation Department and under its direction, the public welfare requires the examination of persons of both sexes taken into custody by the Police Department of the City for the purpose of preventing the spread of infectious and contagious diseases; now, therefore,

"Be it ordained by the City of Seattle as follows:

"Section 1. For the purpose of preventing the spread of contagious and infectious diseases or maladies, it shall be the duty of the Sanitation Department of the City of Seattle to duly examine in such manner and by such methods as modern science has found to be proper all persons who are taken into custody by the Police Department of the City, who are suspected of being afflicted with any contagious or infectious disease or malady, and the Sanitation Department and the Commissioner of Health are hereby authorized and empowered, and it shall be their duty, to order any such persons so taken into custody to be examined for such purpose."

Ordinance No. 37,928, amendatory of Ordinance No. 15,957, provides.

"Section 6. Whenever it shall come to the knowledge of the Commissioner of Health of the City of Seattle that any adult therein has chickenpox, or any person therein has smallpox, varioloid, syphilis, gonorrhea, or any other contagious or infectious disease of a similar or different kind from that herein specified, or any disease or sickness dangerous to the public health, said Commissioner is hereby authorized and empowered, and it shall be his duty to forthwith, whenever in his judgment it is safe, expedient and practicable, cause such infected person to be removed to and kept in a hospital, sanitarium, a separate house, or such place as may be designated by the Commissioner of Health, or as may be by law or ordinance provided therefor, and cause said person to be properly treated and cared for, and to make such other rules and regulations as may be necessary or advisable for the protection of the public health."

Then follows *inter alia* a legislative assertion of existing local conditions calling for the exercise of the police power.

Sec. 1, Art. 20, of the State Constitution provides that:

"There shall be established by law a State Board of Health . . . with such powers as the legislature may direct."

It is also provided, 11, Art. 11, that "any county, city, town or township may make and enforce within its limits all such local, police, sanitary, and other regulations as are not in conflict with the general laws." The legislature in obedience to the warrant of the constitution has passed general laws creating a State Board of Health and defining its duties. The law seems to have been drawn upon the theory that the municipalities would exercise their power to enact such measures as they saw fit to care for, protect, and preserve the public health. That such thought prevailed is evidenced by reference to 7507, wherein the general powers of cities of the first class are enumerated. Power is granted "To erect and establish hospitals and pesthouses, and to control and regulate the same." (Subd. 17)

"To restrain and provide for the punishment of vagrants, mendicants, prostitutes and other disorderly persons;

"To provide for the punishment of all disorderly conduct, and of all practices dangerous to public health or safety, and to make all regulations necessary for the preservation of public morality, health, peace and good order within its limits, and to provide for the arrest, trial and punishment of all persons charged with violating any of the ordinances of said city; but such punishment shall in no case exceed the punishment provided by the laws of the State for misdemeanors." (Subds. 35, 36)

In the act creating the State Board of Health it is provided:

"The State Board of Health shall have supervision of all matters relating to the preservation of the life and health of the people of the State. The Board shall have supreme authority in matters of quarantine, and may declare and enforce it when none exists, may modify, relax or abolish it when it has been established. The Board may have special or standing orders or regulations for the prevention of the spread of contagious or infectious diseases. . . . It shall be the duty of all local boards of health, health authorities and officials, officers of the state institutions, police officers, sheriffs, constables, and all other officers and employees of the State, or any county, city or township thereof, to enforce such quarantine and sanitary rules and regulations as may be adopted by the State Board of Health, and in the event of failure or refusal on the part of any member of said boards or other officials, or persons in this section mentioned to so act, he or they shall be subject to a fine of not less than fifty dollars, upon first conviction, and upon conviction for second offense of not less than one hundred dollars." Rem. Code, Sec. 5406.

"In case of the question arising as to whether or not any person is affected or is sick with a dangerous, contagious or infectious disease, the opinion of the health officer shall prevail until the State Board of Health can be notified, and then the

opinion of the executive officer of the State Board of Health, or any member or physician he may appoint to examine such case shall be final." Rem. Code, Sec. 5546.

"The term 'dangerous, contagious or infectious disease,' as used in this act, shall be construed and understood to mean such disease or diseases as the State Board of Health shall designate as contagious or infectious and dangerous to the public health." Rem. Code, Sec. 5547.

There are two questions discussed by counsel that may be summarily disposed of; the first being that the commissioner cannot obey the order of the court and bring his ward into the presence of the physicians appointed to examine him or into court without subjecting himself to the penalties of the law, and for that reason the writ of habeas corpus will not issue. The law contemplates no such absurdity. If the court has jurisdiction to enquire into the cause of his detention, resort to examination and expert opinion by those skilled in the diagnosis of disease would not be a breaking of the quarantine. The law is not aimed at such situations. The order of the court would be a complete defense. State ex rel. O'Bannon v. Cole, 220 Mo. 697, 119 S. W. 424, 22 L. R. A. (N. S.) 990.

The other proposition is that the city has no authority to pass health ordinances or to create the office of health commissioner. It is true that the constitution provides that a state board of health shall be created and makes no provision in terms for the establishment of city boards of health, but a city has general power, both by statute and at common law, to enact all necessary police regulations for the preservation of the morals and health of its inhabitants, the only limitation being a contrary provision of the general law. We find no conflict between the general law and the city ordinances, they seem to have been drawn with careful regard to the harmonious working out of the problems of public health. State ex rel. Rose v. Hindley, 67 Wash., 240, 121 Pac., 447. For, if there be sole power in the state board, that power is satisfied by the preservation of a right of appeal to the state board, the order then becomes the act of the state board, for we cannot concern ourselves with the methods provided by law for the exercise of a jurisdiction founded in the constitution.

This case really presents all the features of a return to the petition for a writ of habeas corpus, and we shall treat it as such and shall refer to Williams as the petitioner and the health commissioner as the relator.

"It is the contention of the petitioner that to deny him a review of the findings of the health officers is to suspend the writ of habeas corpus; that the boards of health are not immune to judicial review and that their actions and findings are open to judicial inquiry the same as other boards, institutions and officers. "Their determinations are not final and conclusive; if they were, then the exercise of such summary power could not be upheld." Bailey, Habeas Corpus, Sec. 106; People ex rel. Copcutt v. Board of Health of Yonkers, 140 N. Y. 1, 35 N. E. 320, 37 Am. St. 522, 23 L. R. A. 481. And counsel undertakes to fix a boundary line beyond which the state cannot arbitrarily extend the police power. It is, "The legislature may not under guise of police regulation arbitrarily invade personal rights—when those rights are involved it becomes the duty of the court to inquire into it." Relator on the other hand takes the position that it is not only within the power of the legislature to provide that the findings of the state board of health shall be final, but that, it having done so, the courts cannot under the pretense of habeas corpus proceeding sit in review of its findings.

This then is the controlling question—whether the legislature has power to create a board of health and make its rulings final and conclusive when called in question in a court of general jurisdiction.

In People ex rel. Copcutt v. Board of Health, supra, it is maintained that an attempt to make a finding of the board conclusive (the law did not make it so) would violate the constitutional right of the one detained. In the case of In re Smith 146 N. Y. 68, 40 N. E. 497, 48 Am. St. 769, 28 L. R. A. 820, while granting the power of the legislature to provide summary methods for the suppression and control of disease, it is strongly insinuated that the acts of the board cannot be upheld, unless a state of facts is shown that will warrant the restraint, otherwise a writ will issue. But it seems to us that these cases are not controlling. They were rightly decided upon the law of the case, but their insinuations are not to be sustained.

A writ of habeas corpus is a writ of right, and is never to be denied in any case where the liberty of the subject is made the subject of inquiry. But it has

always been held that a return showing a legal cause for the detention of a petitioner is enough to suspend the operation of the writ. The power to detain one who is suspected of having a contagious disease rests in the police power, and to this extent the authority of the commissioner is not challenged, but the right to restrain a subject without judicial review is vehemently denied.

"The police power is to the public what the law of necessity is to the individual." *State v. Mountain Timber Co.*, 75 Wash. 581, 135 Pac. 645, L. R. A. 1917D 19.

"Private rights must be deemed to be subordinate to the general interest of the public. * * * And in respect of personal right every citizen is bound to conform his conduct and the pursuit of his calling to such general rules as are adopted by society, from time to time, for the common welfare." *Parker and Worthington, Public Health and Safety, Sec. 12.*

"The state may interfere wherever the public interests demand it, and in this particular a large discretion is necessarily vested in the legislature to determine not only what the interests of the public require, but what damages are necessary for the protection of such interests." *McGhee, Due Process of Law, 301.*

See, also, *Manigault v. Springs*, 199 U. S. 473; *State v. Somerville*, 67 Wash. 638, 122 Pac. 324.

And since *Barbier v. Connolly*, 113 U. S. 31, it has been held that the limitations of the Fourteenth Amendment were not intended to interfere with the exercise of the police power on the part of the state.

"Nor can it justly be said that the proceedings of the authorities, with respect to the special orders mentioned, do not constitute 'due process of law,' or that they violate 'the law of the land' for any of the following reasons, namely:

"1. That the functions of accuser and judge are blended in the same body; 2. That no process is served, or notice of the proceedings given to the parties interested; 3. That the judgment precedes the trial; 4. That the accused is not confronted with the witnesses against him; 5. That the testimony is not under oath; nor the ordinary rules of evidence observed; or 6. That no means are afforded to the accused to compel the attendance of witnesses." *Parker and Worthington, Public Health and Safety, Sec. 38.*

See, also, *State ex rel. Davis-Smith Co. v. Clausen*, 65 Wash. 156, 117 Pac. 1101, 37 L. R. A. (N. S.) 466.

If the legislature makes proper classification or prescribes methods, the reasonableness of its acts must rest in the nature of the subject treated.

"The test of reasonableness is applicable alike to the statutes of the legislature passed in the exercise of the police power and to the acts of local municipal legislative bodies acting under powers delegated by the legislature. The English courts have from time immemorial applied the test to municipal legislation, and our courts assume a much more untrammelled attitude in examining the reasonableness of municipal ordinances. Yet every intendment is to be made in favor of the lawfulness of the exercise of municipal power making regulations to promote the public health and safety, and it is not the province of courts, except in clear cases, to interfere with the exercise of the power reposed by law in municipal corporations for the protection of local rights and the health and welfare of the people in the community." *McGehee, Due Process of Law, page 308.*

In testing the reasonableness of an ordinance or legislative conduct sounding in the police power, the courts have not been inclined to go beyond the query whether the subject-matter of the act is within the range of its authority, and having so determined they will not revise, correct or nullify the methods and means employed to accomplish the purpose of the law. That the preservation of the public health is a proper subject for the exercise of the police power goes without saying: Indeed, it is the first concern of the state.

"The tendency of judicial and public opinion to translate the maxim, *salus populi suprema lex*; the public health is the highest law; and whenever a police regulation is reasonably demonstrated to be a promoter of public health, all constitutionally guaranteed rights must give way, to be sacrificed without compensation to the owner." *Tiedeman, State and Federal Control of Persons and Property, Sec. 169.*

Indeed, it may be said that, where the police power is set in motion in its proper sphere, the courts have no jurisdiction to stay the arm of the legislative branch of the government, for it is operating in its own particular field, where even the courts are powerless to insist upon a procedure consistent with the forms of the common law. Some courts have held that the discretion and judgment of admin-

istrative officers, while very broad, is not absolutely and in all cases beyond judicial control, but the tendency is away from this doctrine, for, granting the right to question means and methods in one case, the questions of fact upon which the administrative order is based might be raised in every case, and the object of the law, which is to deal summarily, to the end that imminent peril to the public may be averted, would be wholly overcome. At any rate, a somewhat extended exploration of the books convinces the writer that a court should not inquire into the reasonableness of an ordinance sounding in the police power in any case where the legislative body has provided the means and methods of carrying it out.

That a city council may pass ordinances under its general powers to promote and preserve the public health, even to the extent of doing that which would be rejected as unreasonable if passed under its authority to legislate with reference to corporate affairs, is affirmed, as we read the text, by Judge Dillon.

"In other words, what the legislature distinctly says may be done cannot be set aside by the courts because they may deem it to be unreasonable or against sound policy. But where the power to legislate on a given subject is conferred, and the mode of its exercise is not prescribed, then the ordinance passed in pursuance thereof must be a reasonable exercise of the power, or it will be pronounced invalid." Dillon, *Municipal Corporations* (5th ed.), Par. 600.

And the author, in commenting on the case of *Ex parte Vance*, 42 Tex. Cr. 619. 62 S. W. 568, credits it with approval of the text just quoted, and "as holding that the court may pass upon the reasonableness of an ordinance passed in pursuance of an express grant of power from the legislature where the mode of the exercise of the power is not prescribed, or the legislature has not acted directly on the subject."

The Federal government has, in the exercise of its sovereignty, and for many years, assumed to hold immigrants for examination and possible quarantine. Under the Federal statutes and the regulation of the department, the executive officers are given a discretionary power to determine the right of an immigrant to land. There may be an appeal to the secretary having charge of immigration affairs. It is provided that his decision shall be final. In *Nishimura Ekiu v. United States*, 142 U. S. 651, the Supreme Court denied the writ of habeas corpus. It was contended that the law giving the immigration officers exclusive authority to determine the right of a party to land was so far unconstitutional as to deprive the petitioner of her liberty without due process of law.

"Congress may, if it sees fit, as in the statutes in question, in *United States v. Jung Ah Lung*, just cited (124 U. S. 621), authorize the courts to investigate and ascertain the facts on which the right to land depends. But, on the other hand, the final determination of those facts may be entrusted by Congress to executive officers; and in such a case, as in all others, in which a statute gives a discretionary power to an officer, to be exercised by him upon his own opinion of certain facts, he is made the sole and exclusive judge of the existence of those facts, and no other tribunal, unless expressly authorized by law to do so, is at liberty to re-examine or controvert the sufficiency of the evidence on which he acted. *Martin v. Mott*, 12 Wheat. 19, 31; *Philadelphia & Trenton Railroad v. Stimpson*, 14 Pet. 448, 458; *Benson v. McMahon*, 127 U. S. 457; *In re Oteiza*, 136 U. S. 330. It is not within the province of the judiciary to order that foreigners who have never been naturalized, nor acquired any domicile or residence within the United States, nor even been admitted into the country pursuant to law, shall be permitted to enter, in opposition to the constitutional and lawful measures of the legislative and executive branches of the national government. As to such persons, the decisions of executive or administrative officers, acting within powers expressly conferred by Congress, are due process of law. * * *

"The decision of the inspector of immigration being in conformity with the act of 1891, there can be no doubt that it was final and conclusive against the petitioner's right to land in the United States. The words of section 8 are clear to that effect, and were manifestly intended to prevent the question of an alien immigrant's right to land, when once decided adversely by an inspector, acting within the jurisdiction conferred upon him, from being impeached or reviewed, in the courts or otherwise, save only by appeal to the inspector's official superiors, and in accordance with the provisions of the act."

See, also, *United States ex rel. Schleiter v. Williams*, 203 Fed. 292; *United States ex rel. Aronowicz v. Williams*, 204 Fed. 833; *United States v. Gin Fung*, 100 Fed. 389.

In *United States v. Ju Toy*, 198 U. S. 253, the court seems to have removed the doubt, theretofore existing, as to whether the rule of its former decisions would be

extended to one who claimed to be a citizen of the United States. The court held the act to apply, "whatever the ground on which the right to enter the country is claimed—as well when it is citizenship as when it is domicile and the belonging to a class excepted from the exclusion acts," and

"But it is not improper to add a few words. The petitioner, although physically within our boundaries, is to be regarded as if he had been stopped at the limit of our jurisdiction and kept there while his right to enter was under debate. If, for the purpose of argument, we assume that the Fifth Amendment applies to him and that to deny entrance to a citizen is to deprive him of liberty, we nevertheless are of opinion that with regard to him due process of law does not require a judicial trial. That is the result of the cases which we have cited and the almost necessary result of the power of Congress to pass exclusion laws. That the decision may be entrusted to an executive officer and that his decision is due process of law was affirmed and explained in *Nishimura Ekiu v. United States*, 142 U. S. 651, 660, and in *Fong Wue Ting v. United States*, 149 U. S. 698, 713, before the authorities to which we already have referred. It is unnecessary to repeat the often quoted remarks of Mr. Justice Curtis, speaking for the whole court in *Murray's Lessee v. Hoboken Land & Improvement Co.*, 18 How. 272, 280, to show that the requirement of a judicial trial does not prevail in every case."

It would seem that the analogy of these cases is complete, but, if it be not so it would appear that we have held in principle as we are now holding. In *Davison v. Walla Walla*, 52 Wash. 453, 100 Pac. 981, 132 Am. St. 983, 21 L. R. A. (N. S.) 454. we held that things done under the police power may be done without resort to judicial proceedings, and in *State v. Somerville*, 67 Wash. 638, 122 Pac. 324, we said:

"Many courts have held that a large discretion is necessarily vested in the legislature when exercising that power, and that the legislature may determine not only what the public interest demands, but also what measures are requisite and necessary to secure and protect the same."

And in the concurring opinion by the writer of this opinion:

"Where the facts depend upon proof, I think it is competent for the legislature to pass a labor law covering any particular industry, and that the law will be binding upon the courts regardless of the showing that might be made in any particular case. If it were otherwise, we would have a law for 'special cases,' and we could not depend upon general laws, for the obvious reason that the legislature could not pass a law with any assurance that it would be general in its application."

In *State ex rel. Puyallup v. Superior Court*, 50 Wash. 650, 97 Pac. 778, the uncertainty of the statute was urged against the right of a city council to revoke a liquor license except for a cause sufficient to stand the test of judicial review. It was held:

"It is not authority to regulate under certain circumstances or to restrain under certain circumstances, but the authority is absolute and unlimited, and it is evident that the legislature intended to refer the whole subject to the city council."

The provision that the finding of the health officers shall be final is a sufficient evidence of legislative intent to leave the whole matter to the health officers without restraint on the part of the courts. The case just cited rested upon, and is sustained by, *State ex rel. Aberdeen v. Superior Court*, 44 Wash. 526, 87 Pac. 818.

We are unable to draw a line that would logically differentiate this case from the principle involved in those cases where the courts have sustained findings of medical and dental boards. If it is within the power of the legislature to provide for the licensing of all those who are skilled in the profession devoted to the health of the people, and to lodge the determination of their qualifications in a board of professional men, it ought to follow that the legislature could provide by a similar law for taking the judgment of men having the same skill upon a question of fact as to the existence of, or whether a given person was, or is, afflicted with a contagious, dangerous or infectious disease. The right is sustained because the act of such board is in no sense judicial. *State v. Bonham*, 93 Wash. 489, 161 Pac. 377. L. R. A. 1917D 996; *Reetz v. Michigan*, 188 U. S. 505; 30 Cyc. 1550.

The power of the state board to determine the qualification of dentists and physicians has been repeatedly affirmed in this state. *State ex rel. Smith v. Board of Dental Examiners*, 31 Wash. 492, 72 Pac. 110; *Brown v. State*, 59 Wash. 195, 106 Pac. 802; *State ex rel. Brown v. Board of Dental Examiners*, 38 Wash. 325, 80 Pac. 544, where the court said:

"The general rule is well established that the courts cannot review the discretion which has by law been vested exclusively in inferior tribunals."

Our conclusions are not in accord with the text of Bailey, but he is content to rest his conclusions upon the two New York cases referred to in the fore part of this opinion. To follow him would make the exercise of the police power a judicial function. We find nothing in our decisions or in the reasons of the law to sustain such doctrine.

The sustaining grace of the police power being in its inceptions and general application rather than in its consequences as applied to individual cases, we hold that the ordinances of the City of Seattle and the State law are founded in sound reason.

It is finally contended that the law is unconstitutional in that it delegates legislative power to the health boards, in that it leaves to them definitions and classifications of diseases. This court has not heretofore considered similar laws as a delegation of legislative power or authority. The legislation is that of the legislative body, but it is not always practical to meet every phase of the necessity that has called for the law by the enactment of a general statute.

The legislature may well have taken notice of the fact that the nature, virulence and extent of territory covered by contagious and infectious diseases, whether endemic or epidemic, are all factors to be considered in the matter of quarantine, and that, after all, the whole working of a plan for quarantine must depend upon the judgment and discretion of men learned in the science of medicine, and that doctors sometimes disagree. The legislature, as well as the courts, would be helpless in such matters without resort to expert opinion, and their judgments would necessarily lie in greater or less degree in the facility of witnesses and the skill of counsel. It is most likely that the legislature sought to avoid the confusions and delays that must necessarily follow if arbitrary classifications were attempted in the statute, for if it had the power to say, in emergency—in self-defense—that, inasmuch as the whole matter of quarantine must rest ultimately in the judgment of medical men, it could avoid the danger of partisan opinion and fix the seat of that judgment in men of its own choosing, or to be chosen in a way provided, and who, being bound by oath to perform a public duty, and having a due sense of responsibility, presumably would discharge their office with justice and fidelity. We may well adopt the language of the court in another case:

"Because the state has, as in this instance, determined upon and specified the officers upon whose judgment on the questions submitted to them the state is willing to rely. Taking the case at bar for example, if a record of the examination had been produced in court, with the questions, answers, and credits given to each question, who would determine whether or not a particular answer had received a sufficient credit? Certainly not the jury, for they are not presumably competent to pass a proper judgment on such subjects. Not the judge, for his qualifications do not embrace, or at least require, an expert knowledge of the science of dentistry. Expert witnesses could not be properly permitted to testify, for the reason that the state has already designated and empowered experts to pass upon these questions presumably by reason of their recognized qualifications." *State ex rel. Brown v. Board of Dental Examiners*, 38 Wash. 325, 80 Pac. 544.

Nor is there any legal reason for denying the power to quarantine summarily, or to restrain for treatment, a citizen or subject because the authority may be abused or the law maladministered in a given case. *Brown v. State*, 59 Wash. 195, 109 Pac. 802; *In re Thompson*, 36 Wash. 377, 78 Pac. 899. It is settled that laws and ordinances creating boards of health and granting wide powers for the effective and effectual carrying out of the legislative plan for protecting health, "must be liberally construed. For, as Mr. Freund says in his work on Police Power, Sec. 446.

"The detention of persons affected with or suspected of contagious diseases in quarantine presents one of the cases where the police power is literally the law of self-protection and paramount necessity."

We must credit the legislature with a consideration of these things.

The State board of health and the health commissioner of the City of Seattle

"Being the agency created by the legislature to prevent the outbreak and spread of disease, and to remove causes of sickness, the presumption is always in favor of the board of health, and its action will not be interfered with unless it appear unreasonable or oppressive. The fact that its membership may sometimes be composed of extremists is not reason for denying the power conferred by the leg-

islature. Nor should we be controlled by the fact that a scientific theory of today be discarded tomorrow. In matters affecting the public health it is the part of reason and common sense to adopt the best scientific thought of the age in which we live. If research and investigation lead to other accepted theories, then we must adopt them. Were the rule otherwise, both the courts and the legislature would be without a competent guide." Board of Health of Covington v. Kellman, 156 Ky. 351, 160 S. W. 1052, 49, L. R. A. (N. S.) 354.

The rule being that health laws shall be liberally construed, the power of the legislative branch of the government is not to be lightly interfered with or set aside. Courts will not seek for an opportunity to declare a right of appeal or review in cases resting in public necessity.

We find, as the Supreme Court of New Jersey found in a similar case:

"But upon the general merits of the controversy, we are unable to perceive anything in the legislation referred to conferring upon the Common Pleas the right to review the conditions, and the emergency in the locality, which prompted the board of health to impose the restrictions and quarantine complained of in this case. We are unable to perceive any authority in the legislation itself or in the public policy upon which it is based which can be said to contemplate the submission to a legal tribunal of the public necessity, which requires in an emergency the prompt and expeditious intervention of a board to which the legislature for the protection of life and health, in a community, has especially committed the determination of the facts." Board of Health v. Union Common Pleas, 83 N. J. L. 392, 85 Atl. 217, for, as said in that case, to assume to review a finding of a properly constituted officer vested with authority to determine a fact in a critical situation involving detriment to the life and health of a community is tantamount to a declaration that the police power of the city is moribund and useless.

Finally, we hold that it is within the power of the legislature, in dealing with the problems of public health, to make the determination of a fact by a properly constituted health officer final and binding upon the public as well as upon the courts.

Having so concluded, the writ will issue.

MAIN, C.J., FULLERTON, HOLCOMB, and MOUNT, J. J., concur.

(No. 14916. Department Two. August 27, 1918.)

THE STATE OF WASHINGTON, on the Relation of Mrs Emma Westman, Plaintiff,
v. THE SUPERIOR COURT FOR KING COUNTY, Respondent.

Application filed in the Supreme Court July 23, 1918, for a writ of certiorari to review the action of the Superior Court for King County. Jurey, J., in denying the petition of the relator for release on habeas corpus. Writ denied.

W. F. Hays and Lockerby & Wright, for relator.

Hugh M. Coldwell, Walter F. Meier, Thomas J. L. Kennedy, and Geo. A. Meagher, for respondent.

Per Curiam.—This case is in all respects like the case of *State ex rel. McBride v. Superior Court*, ante, p. —, 173 Pac. —. All the questions presented in this case are decided in that case adversely to the contention of the relator. For the reasons therein stated, the writ is denied.

This decision practically stopped the various efforts to have these people released from quarantine.

In July 1918, the mayor of the City of Seattle called a meeting of the mayors of the State, together with local and county health officers of the State, to discuss ways and means of handling the venereal disease problem. It was the unanimous opinion of the representatives present at this meeting that the only feasible method of handling this problem was the creation of a central quarantine station where cases could be brought from all parts of the State and there treated. Various places were under consideration at the

time of this meeting, among others being the Federal Quarantine Station at Diamond Point. However, investigations of said Quarantine Station showed that it was not adequate for this purpose. At this meeting a committee was appointed to try to arrange for the raising of the money to build and equip such Central State Institution, but the first question that was brought before this committee was whether or not persons could be taken from one county to another for the purpose of quarantine. Accordingly an opinion was asked of the Attorney General and his decision follows:

OFFICE OF THE ATTORNEY GENERAL

Olympia, Wash., May 15, 1918.

Hon. T. D. Tuttle,
State Commissioner of Health,
Seattle, Washington.

Dear Sir: We have received your letters of April 24, May 3 and May 13, 1918, asking as to the authority of the State Board of Health to make a regulation quarantining persons afflicted with venereal diseases in a central isolated hospital to be located in some part of the state other than that in which the infected person may be detected.

In reply thereto we beg to advise you as follows:

Sections 5406 and 5407, Rem. & Bal. Code, provide as follows:

"Section 5406. The State Board of Health shall have supervision of all matters relating to the preservation of the life and health of the people of the State. The Board shall have supreme authority in matters of quarantine, and may declare and enforce it when none exists, may modify, relax or abolish it when it has been established. The Board may have special or standing orders or regulations for the prevention of the spread of contagious or infectious diseases, and for governing the receipt and conveyance of remains of deceased persons, and such other sanitary matters as admit of and may best be controlled by universal rule. It may also make and enforce orders in local matters, when in the opinion of the State Board of Health, an emergency exists and the local board of health has neglected or refused to act with sufficient promptness or efficiency, or when no such local board has been established, and all expenses so incurred shall be paid by the county in which such services are rendered out of the general fund of said county. It shall be the duty of all local boards of health, health authorities and officials, officers of the State institutions, police officers, sheriffs, constables and all other officers and employees of the State, or any county, city or township thereof, to enforce such quarantine and sanitary rules and regulations as may be adopted by the State Board of Health, and in the event of failure or refusal on the part of any member of said boards or other officials or persons in this section mentioned to so act, he or they shall be subject to a fine of not less than fifty dollars, upon first conviction, and upon conviction of second offense of not less than one hundred dollars. The Board shall make careful inquiry as to the cause of disease especially when contagious, infectious, epidemic or endemic, and take prompt action to control and suppress it. It shall respond promptly, when called upon by the State or local government and municipal or township boards of health, to investigate and report upon the water supply, sewerage, disposal of excreta, heating, plumbing or ventilation of any place or public building.

"Section 5407. It shall be the duty of the local board of health, health authorities or officials, and of physicians in localities where there are no local health authorities or officials, to report to the State Board of Health, promptly upon discovery thereof, the existence of any one of the following diseases which may come under their observation, to-wit: Asiatic cholera, yellow fever, smallpox, scarlet fever, diphtheria, typhus, typhoid fever, bubonic plague or leprosy, and of such other contagious or infectious diseases as the State Board may from time to time specify. And when any contagious or infectious disease shall, in the opinion of the State Board of Health, become or threaten to become epidemic in any city, village or county, and the local authorities shall neglect or refuse to enforce measures which, in the opinion of the State Board of Health, are efficient for its prevention, the State Board of Health, or its executive officers, on the order of the president of said Board, may appoint a medical or sanitary officer,

and such assistants as he may require, and authorize him to enforce such orders or regulations as said board or its executive officer may deem necessary, the expense thereof to be paid by that county in which such services are rendered out of its general fund."

Sections 5435-40, inclusive, of Rem. & Bal. Code, provide for the organization and establishment of city boards of health, and that all expense incurred in performing the duties required by such boards of health shall be paid by the town, village or city by which, or on behalf of which, such expenses shall have been incurred. Sections 5541-5549, inclusive, Rem. & Bal. Code, provide for the appointment of county and city boards of health, and also that the expenses incurred in carrying out the provisions of the act shall be paid by the county or city by which, or in behalf of which, such expenses shall have been incurred.

By Section 5544, Rem. & Bal. Code, it is provided that the county health officer shall have supervision over all matters pertaining to the preservation of life and health of the people of his jurisdiction, subject to the supervision and control of the State Board of Health.

Section 5543 provides as follows:

"It shall be the duty of the county board of health to make such rules and regulations as in their opinion may be necessary for the prevention, suppression and control of any dangerous, contagious or infectious disease, which rules and regulations shall take effect from and after the approval of the State Board of Health. They shall have the authority to establish and maintain a pesthouse or isolation hospital or quarantine station, and to restrain, quarantine, vaccinate or disinfect any person or persons sick with or exposed to any dangerous, contagious or infectious disease, in accordance with their rules and regulations, and the rules and regulations of the State Board of Health."

By section 5547 Rem. & Bal. Code, the term "dangerous, contagious or infectious diseases" is designated as such disease or diseases as the State Board of Health shall designate as contagious or infectious and dangerous to the public health.

Considering together the various statutes with respect to the State Board of Health and county and city boards of health, we believe the intention of the legislature is evident to provide that the immediate control and handling of cases of infectious and contagious diseases shall be by the respective cities and counties in which the same arises, and that the expense thereof shall be borne by such cities or counties, subject, however, to the provision that where the counties or cities fail to act that the State Board shall then assume charge, and subject further to the requirement that the State Board shall at all times have general supervision over matters within the jurisdiction of the various county and city boards.

In view of the foregoing, we are of the opinion that the State Board of Health would have no power to promulgate an order establishing a central isolation hospital for persons afflicted with venereal diseases.

We are of the opinion, however, that if the State Board should promulgate an order designating venereal disease as a dangerous, contagious or infectious disease, that the county or city board of health would then have ample authority to establish and maintain an isolation hospital for persons afflicted with such disease.

Yours respectfully,

(Signed) JOHN H. HOMER,

Assistant Attorney General.

There is no question in our minds but that the most economic and efficient method of handling the quarantine of venereal diseases is through a central station, owned and operated by the State. Such an institution should be provided.

In June, 1918, the Kahn-Chamberlain bill was passed by Congress, providing monies to be distributed among the various States for the purpose of fighting venereal diseases. The administration of this fund was placed in the hands of the United States Public Health Service, who sent an officer to each State to start the campaign against these diseases. Accordingly Dr. B. W. Brown, surgeon of the United States Public Health Service, was sent to Washington and, together with your State Commissioner of Health, visited

the following cities: Seattle, Tacoma, Aberdeen, Vancouver, Bellingham, Everett, Yakima, Walla Walla, Spokane, Raymond and South Bend.

Practically each of these cities was visited two or three times and an active campaign made to secure the local co-operation in the fight against venereal diseases. We believe these efforts have given excellent results.

From the fund apportioned to Washington for the fiscal year ending June 30th, 1919, in accordance with instructions of the United States Public Health Service, a department of venereal diseases has been established in the State of Washington. Dr. W. M. Van Patten of Walla Walla has been commissioned by the United States Public Health Service to take charge of this work and will succeed Dr. Brown at this station. Mrs. Aristine Felts, employed by the Fosdic Commission, is at work in the State of Washington. Her salary is paid by the Fosdic Commission and her traveling expenses are paid from the fund allotted by the Federal Department to the State of Washington. Her functions are to visit the various smaller cities and assist the police and health department in locating lewd women and prostitutes who are afflicted with venereal diseases, and to see that such persons place themselves under the care of a physician until cured, or are placed under quarantine by the health department. Dr. Brown and Dr. Van Patten are at this time working in a campaign to organize in all parts of the State Social Hygiene Societies for the education of the people relative to the prevention of social diseases. If this work is to be continued it will be necessary for the State Legislature to appropriate an equal sum of money for the following biennium, to meet that provided by the Federal Department.

WORK IN CONJUNCTION WITH THE UNITED STATES PUBLIC HEALTH SERVICE

The war activities, resulting in a large number of recruits being concentrated in the State, created new problems that required the constant attention of the State Health Department. From the very beginning of the construction of Camp Lewis the State Commissioner of Health was in constant touch with Captain Northington, in charge of the sanitation of the Camp during the period of construction, and later with Major Smith and Lieutenant-Colonel Fields. This work required frequent visits to Camp Lewis and the vicinity, in efforts to secure the highest degree of sanitary conditions possible in the area surrounding and tributary to Camp Lewis.

An important problem that confronted the workers was that of the pleasure resorts and small business places that sprung up around the Camp, these places being decidedly inclined to disregard sanitary requirements. In the end they became so undesirable that the military authorities were forced to order their discontinuance.

In October, 1917, an extra cantonment zone was declared around Camp Lewis, and this zone was put under the supervision of Major Magruder of the United States Health Service, who was authorized by the Federal Health Department to employ such assistants as were necessary to maintain a sanitary condition in this zone. This zone was later extended to include Olympia and Tacoma. A large amount of intensive sanitation was accomplished under Major Magruder's supervision, eleven inspectors, one nurse and two medical assistants being employed in this work.

In January, 1918, extra cantonment zones were declared at Vancouver and Bremerton. The Federal Health Department requiring that all employees

be under the direct supervision and control of a commissioned officer of the United States Public Health Service, T. D. Tuttle, State Commissioner of Health of Washington, was appointed as Acting Assistant Surgeon of the United States Public Health Service, and directed to supervise the work in Bremerton and Vancouver, this work being, in reality, a part of the State public health work. Accordingly, three inspectors were put to work in the Vancouver district and two in the Bremerton district. The results of this work in the Vancouver district have been highly satisfactory. If those who may have visited Vancouver prior to 1918 and noted the insanitary conditions of the hotels, restaurant and places where food products were handled, will visit Vancouver today they will see a wonderful improvement resulting from intensive sanitation. The people of Vancouver took very kindly to this work and I have heard many remarks from merchants who were forced by this work to make radical changes in their places of business, to the effect that they would never return to the old method of doing business. It is hoped that with the ending of the war and the withdrawal of the Federal Department inspectors provided in this zone, that the local authorities will continue this work and keep the Vancouver district up to its present standard or attain further improvement. In our work in Vancouver we were most loyally supported by the military authorities, and at all times the most pleasant relations existed between the Public Health inspectors and the military department.

In the Bremerton zone a great deal was accomplished in the line of improving sanitary conditions. I cannot say that the results in Bremerton were as good as those in Vancouver, but we earnestly hope that the people of Kitsap County will see their way to continue this work and bring the Bremerton district up to the standard attained in the Vancouver district; but in no district can sanitary conditions be maintained without the employment of inspectors and health officers whose sole duty it is to look after conditions that may affect the public health.

The average monthly expenditure of the United States Public Health Service in the Bremerton and Vancouver extra cantonment zones amounted to \$771.00. I have not the figures of the average expenditures of the Camp Lewis extra cantonment zone, but they must have far exceeded or even doubled that of the Bremerton and Vancouver zones combined.

The people of these two districts have been given a demonstration of what intensive sanitary inspection means, and it is our sincere hope that they will see their way to continue this sanitary work when the United States Public Health Service withdraws its assistance.

THE INFLUENZA EPIDEMIC

While this report nominally only covers the biennial period ending September 30th, 1918, the fact that the influenza epidemic has delayed its preparation justifies a brief statement relative to the influenza epidemic.

This epidemic was very prevalent in the Eastern states during the month of September, and, realizing that in all human probability it would rapidly spread over the entire country, your commissioner of health took up with the United States Public Health Service the question of the advisability of quarantining individual cases. Accordingly the following telegram was sent and answer received:

Seattle, Wash., Sept. 25th, 1918.

Blue, Washington, D. C.:

Intrastate quarantine Spanish influenza under consideration. What period of quarantine if any do you recommend? Answer.

TUTTLE.

Washington, D. C., Sept. 25, 1918.

Tuttle, Seattle, Wash.:

Service does not recommend quarantine against influenza.

BLUE.

At a meeting of the State Board of Health held in Spokane, September 28th, 1918, the question of quarantining individual cases was discussed. The epidemic struck our state in the early part of October. The immediate introduction of the disease was through a shipment from Pennsylvania to the United States Naval Training Station at Bremerton of about 1500 men, a large percentage of whom were afflicted with influenza when they reached their destination. From this focus the disease spread widely, but it was evident that the disease was brought into many localities from other sources, as many outbreaks were not directly traceable to the infection at or near Seattle. Stringent measures were taken to prevent the spread of the disease. City and county health officers were advised and urged to prohibit any public gatherings of any character whatsoever upon the first appearance of the disease in their districts. All public gatherings, except those absolutely essential to the maintenance of life and to the prosecution of essential war industries were prohibited. After about six weeks it appeared that the disease was so on the decline that these stringent measures were relinquished. In from two or three weeks the disease again made rapid progress. At this time a conference of the health officers of the United States was called at Chicago for the purpose of discussing results obtained in the various States, and to attempt to devise ways and means to prevent the spread of the disease. This conference was very largely attended, about 950 delegates being present.

The outstanding feature of the discussion of the subject at this conference was the evidence that whatever efforts were made the spread of the disease was only retarded and not prevented. As one health officer very aptly expressed the situation: "One can avoid contracting the disease if he will go into a hole and stay there, but the question is how long would he have to stay there? The indications are that it would be at least for a year or longer." The army experience, as presented by Colonel Victor Vaughn, indicates that 25% of people between the ages of 20 and 40 will contract influenza, regardless of the efforts that may be made to prevent its spread. The efficacy of every means of procedure was discussed. Many representatives thought they had accomplished results by certain methods while other equally good observers found that these same methods gave no results in their community. For instance, the mask was highly commended by the representative from San Francisco and it was claimed that the mask did prevent the spread of the disease in San Francisco; but the State Health Officer of California presented the death rate per 1000 population from San Francisco and Los Angeles (Los Angeles did not use the mask) and it was evident that the deaths per 1000 population from influenza in the two cities were identical. Quarantine of individual cases was practiced in many localities, and yet in those localities the disease seemed to spread quite as rapidly as in localities where individual cases were not quarantined. The character of this disease is such that we are in the dark, to a large extent, as to a means that will prevent its spread. An illustration of extreme precautions being taken and

proving fruitless was presented to me by a representative of one of the steamship companies whose vessels ply between Nome, Alaska, and Seattle. This company, realizing that there was no influenza in Nome, and realizing that their vessel would be the last one to go to Nome before the passage was frozen, undertook to prevent, if possible, taking influenza to the Northern city. In order to do this he had every passenger and every employee of the boat examined by the company physician, with instructions that any one who gave the slightest evidence of any sickness that might possibly be construed as influenza or of a communicable character, be prohibited passage. Realizing also that a single physician might overlook an infected person, the steamship company had two other physicians make separate examinations of all proposed passengers for evidence of sickness that might be construed as communicable and those so found were prohibited passage. This boat went direct from Seattle to Nome and there was no sickness during the voyage. On reaching Nome all passengers leaving the vessel were placed in the hospital and kept in strict quarantine for five days. In addition, all mail was fumigated for 10 hours before being distributed, and yet with these precautions, which were extreme, this boat undoubtedly carried influenza to Nome, and when it reached Seattle on its return trip there were approximately 150 passengers sick with influenza. The conclusion is that there must have been "carriers" among the passengers, a "carrier" being a person who has been exposed to a disease but who is apparently immune from that disease, and yet will carry with him or her the germs of the disease and transmit them to others. We know of no way at present whereby we can detect a "carrier" of influenza germs. In fact, we are in extreme doubt as to what germ is responsible for this disease.

Realizing that we must confront this disease, and being on the lookout for it, restrictive measures were instituted in the State of Washington early in the progress of the pandemic. At the same time there was prepared and distributed, so far as our funds would permit, a vaccine that we felt would have certain preventive influence, especially with regard to the pneumonia that proved so fatal in this disease. Reports received by us indicate that this vaccine did have a very marked influence in preventing pneumonia among those to whom it was administered. Whether due to early action or whether due to the influence of the vaccine used in this State, I am not prepared to state, but evidence indicates that in proportion to the population the death rate in the State of Washington from influenza and pneumonia incident to influenza, is as low as any State in the United States, if not lower than any other State. In fact, up to date I have not received figures that indicate that any State will show a lower or as low a death rate per 1000 population from influenza as will the State of Washington.

Our fight with this disease is not finished. In fact, we are simply in the midst of it. Experience teaches us that we may anticipate that influenza will prevail throughout the present winter, will be very much decreased during the summer, and will show a decided recrudescence during the next winter. We must, therefore, be prepared to meet the situation. During the present epidemic much suffering was prevented by the organized condition of our National Red Cross Society, as a result of war activities. Through this agency a large number of nurses have been supplied to communities and Red Cross emergency hospitals equipped and maintained. In addition to this, through the agency of the United States Public Health Service, with funds provided

by Congress, we were able to send to communities where the local doctors were overworked or where there were no local doctors, physicians to attend those suffering from influenza. The probabilities are that no such Federal aid will be available next year, as this aid was a direct result of war activities. It seems, therefore, that an emergency fund should be provided and placed in the hands of the Governor through which such unusual conditions may be met.

COMMUNICABLE DISEASES

The following tabulated statements set forth the prevalence of the five principal communicable diseases in the State during the years 1916 and 1917 and the first six months of 1918. These statements indicate the relative prevalence of the diseases in the various counties of the State. A more detailed statement of the communicable disease situation is set forth in the report of the Epidemitiologist.

SCARLET FEVER.

COUNTIES	1916		1917		6 Months 1918	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Adams.....			8		13	1
Asotin.....			1			
Benton.....			9		14	
Chelan.....	7		53	4	16	
Clallam.....			3			
Clarke.....	1		67	3	26	12
Columbia.....	1		11		1	
Cowlitz.....	2		4		1	
Douglas.....	3		1			
Ferry.....	3		4			
Franklin.....			2	1		
Garfield.....	8		1			
Grant.....					2	
Grays Harbor.....	60	1	70	3	44	2
Island.....	6		1		4	2
Jefferson.....	17		2		11	6
King.....	23		44		54	8
Seattle.....	139		235	1	404	8
Kitsap.....	6		11		23	
Kittitas.....	2		3		13	
Klickitat.....	15		4		9	1
Lewis.....	8		40	2	8	
Lincoln.....	5		11		13	
Mason.....						
Okanogan.....	1		3		28	2
Pacific.....	26	1	13		12	
Pend Oreille.....	2		1			
Pierce.....	6		35	1	537	5
Tacoma.....	39		89		783	4
San Juan.....						
Skagit.....	6	1	22		13	
Skamania.....						
Snohomish.....	14	1	11		5	1
Everett.....	14	1	28		16	
Spokane.....	9		46	2	8	
Spokane City.....	83	1	60	2	104	1
Stevens.....	12	4	1		10	
Thurston.....	35	2	5	1	6	
Wahkiakum.....	1		1			
Walla Walla.....	22		28		19	
Whatcom.....	8		1			
Bellingham.....	1		3		3	
Whitman.....	39		32	2	41	1
Yakima.....	40	3	8		55	
Totals.....	669	15	1,022	22	2,300	54

DIPHTHERIA.

COUNTIES	1916		1917		6 Months 1918	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Adams.....			3		2	
Asotin.....	1		3			
Benton.....	1				1	
Chelan.....	10		1	1	7	2
Clallam.....	2					
Clarke.....	3	1	1		2	2
Columbia.....	1					
Cowlitz.....			1		2	
Douglas.....	2		2		2	2
Ferry.....						
Franklin.....			1			
Garfield.....						
Grant.....	1		2			
Grays Harbor.....	1		9	2	2	
Island.....			3		4	
Jefferson.....					1	
King (Exclusive of Seattle).....	20	4	7	4	5	
Seattle.....	77	7	111	7	103	5
Kitsap.....	39	3	4	3	3	
Kittitas.....	7		4	4	3	
Klickitat.....			2			
Lewis.....	7		2	2	3	
Lincoln.....	5	1	5		4	
Mason.....	24	1	13			
Okanogan.....	3	2				
Pacific.....					1	1
Pend Oreille.....	2					
Pierce (Exclusive of Tacoma).....	8	2	17	5	61	3
Tacoma.....	61	7	109	3	55	4
San Juan.....						
Skagit.....	2		25	4	11	
Skamania.....	1				1	
Snohomish (Exclusive of Everett).....	8		2		6	
Everett.....			8	2	2	2
Spokane County (Exclusive of Spokane).....	6		9	1	10	
Spokane City.....	26	1	43	6	36	4
Stevens.....	11		1	1	1	1
Thurston.....	4		1	1		
Wahkiakum.....					1	
Walla Walla.....	1		1		1	
Whatcom (Exclusive of Bellingham).....			2		2	
Bellingham.....	2	1	2		2	
Whitman.....	21	1	10	1	8	1
Yakima County.....	23	4	19	1	29	2
Yakima City.....			6		61	
Totals.....	380	35	429	48	432	29

TYPHOID FEVER.

COUNTIES	1916		1917		6 Months 1918	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Adams.....	1		8			
Asotin.....	2				1	1
Benton.....	25		21	5	17	1
Chelan.....	13	1	62	3	29	5
Challam.....	6	2	3		1	
Clarke.....	17		25	6	2	
Columbia.....	13	1	15	1	2	
Cowlitz.....	4		14	1	1	1
Douglas.....	3		29	3	1	
Ferry.....	3	1		2	3	
Franklin.....	10	1	10			
Garfield.....	4					
Grant.....	12	1	5		1	
Grays Harbor.....	9	4	15	8	12	
Island.....	3	1	3	1		
Jefferson.....	1		1	1		
King (Exclusive of Seattle).....	29	3	32	1	3	
Seattle.....	42	11	95	18	12	5
Kitsap.....			6		1	1
Kittitas.....	5	1	6		1	1
Klickitat.....	1		2	1	1	
Lewis.....	15		13	2	3	
Lincoln.....	46	5	32	4		
Mason.....	1					
Okanogan.....	6	3	50	3	6	
Pacific.....	6		7		4	
Pend Oreille.....			1		1	
Pierce (Exclusive of Tacoma).....	9	1	18	4	2	
Tacoma.....	38	7	19	3	2	3
San Juan.....	5	1				
Skagit.....	46	6	30	7	15	1
Skamania.....	1	1	1		1	
Snohomish (Exclusive of Everett).....	14	2	16	1	1	1
Everett.....	13	2	21	3	1	1
Spokane (Exclusive of Spokane).....	8	2	11	3	7	
Spokane City.....	26	4	72	11	16	4
Stevens.....	18	4	35	4	12	
Thurston.....	1	2	2		2	
Wahkiakum.....	4		6			
Walla Walla.....	22	6	137	11	22	1
Whatcom (Exclusive of Bellingham).....		1	2			
Bellingham.....	4		5		5	
Whitman.....	10		16		2	1
Yakima.....	89	3	140	14	23	2
Totals.....	585	78	967	121	213	29

MEASLES.

COUNTIES	1916		1917		6 Months 1918	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Adams.....	173	1	119		10	1
Asotin.....	4		10		2	
Benton.....	16		322		52	
Chelan.....	113		80	2	11	1
Clallam.....	64		35	3		
Clarke.....	52		180	3	392	31
Columbia.....	4		130		38	
Cowlitz.....	4	1	18		19	1
Douglas.....	437	5	4	2	2	
Ferry.....	4	2	50	1	1	
Franklin.....	11		81			
Garfield.....	41		15			
Grant.....	34		101	2		
Grays Harbor.....	20		487	15	39	3
Island.....	24		65		16	
Jefferson.....	209	1	125	2	13	1
King.....	184	5	399	9	122	6
Seattle.....	5,396	11	3,076	18	1,461	16
Kitsap.....	301		817	1	301	1
Kittitas.....	83		343	7	19	1
Klickitat.....	4		168		200	2
Lewis.....	172	6	178	3	59	1
Lincoln.....	270	3	70	4	13	
Mason.....	3	1	1			
Okanogan.....	411	2	19	6	5	1
Pacific.....	16	1	340	3	134	3
Pend Oreille.....	53		43		11	
Pierce.....	359	3	431	10	809	5
Tacoma.....	2,299	10	303	7	211	7
San Juan.....	7		133	2	7	
Skagit.....	1,146	2	399	3	55	
Skamania.....	3		17			
Snohomish.....	167	2	531	7	73	
Everett.....	173	1	843	3	15	
Spokane.....	250	2	251	18	14	
Spokane City.....	3,800	13	1,774	13	34	1
Stevens.....	32	2	310	4	31	
Thurston.....	131	1	90	6	29	1
Wahkiakum.....	1		108	1	68	
Walla Walla.....	6		209	3	7	
Whatcom.....	66		42	11	10	
Bellingham.....	98		238	8	78	1
Whitman.....	86		538	11	20	
Yakima.....	438	3	3,299	15	212	2
Totals.....	17,120	78	16,700	303	4,488	86

WHOOPIING COUGH.

COUNTIES	1916		1917		6 Months 1918	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Adams.....	44	1	35	7		
Asotin.....	8		11		1	1
Benton.....	1		1		4	
Chelan.....	20	4	23	1	6	3
Clallam.....	7	1	4	1		
Clarke.....	53	2	7	5	22	3
Columbia.....			66	1		
Cowlitz.....	2	1	1	1	31	
Douglas.....	127	1			20	1
Ferry.....						
Franklin.....	15		2	1		
Garfield.....	10		1			
Grant.....	23		28	1		
Grays Harbor.....	5	1	21	5	6	1
Island.....	45		23			
Jefferson.....			48	4	2	
King.....	139	1	40	4	46	1
Seattle.....	1,516	16	1,102	12	148	2
Kitsap.....	50	2	186	1	32	1
Kittitas.....	5		53	2	5	
Klickitat.....	1		54		4	2
Lewis.....	38	1	19	5	2	1
Lincoln.....	146	4	30	5	2	
Mason.....	3		1			
Okanogan.....			6		2	
Pacific.....	32	1	24	3	17	1
Pend Oreille.....	53	3	5			
Pierce.....	55	1	116	4	145	2
Tacoma.....	254	10	176	8	32	
San Juan.....				1		1
Skagit.....	86	3	50	3	22	1
Skamania.....	2		8		3	
Snohomish.....	85	2	156	4	4	
Everett.....	67	1	263	10	3	1
Spokane County.....	41	3	22	4	5	
Spokane City.....	252	6	822	5	154	5
Stevens.....	12	3	8	2	18	1
Thurston.....	18	1	43	2		
Wahkiakum.....			26	1	17	1
Walla Walla.....	2	1	66	7	35	3
Whatecom.....	3	2	21	4	1	1
Bellingham.....	10		2	5	3	
Whitman.....	59	2	32	3	13	
Yakima.....	118	4	252	4	414	11
Totals.....	3,412	78	3,853	126	1,219	47

REPORT OF THE EPIDEMIOLOGIST

J. E. HENRY

Communicable Diseases

I became Epidemiologist to the State Board of Health in charge of communicable diseases on January 1, 1918, and served in that capacity until called into active service in the Navy, in October.

I hand you herewith report of the work of my Department, with comments, which, except for detail work, is fairly well covered under the following headings:

I. The Reporting of Communicable Disease

1. The regulations of the State Board of Health require that every communicable disease must be reported by the practicing physician to the health officer having jurisdiction. The health officer having jurisdiction is the county health officer, if the case is outside incorporated cities, or towns, and the city health officer if within incorporated limits; but if any city health office is vacant for the time being, then the county health officer has jurisdiction in that town. This report of the practicing physician must be made in writing and within twenty-four hours of his discovery of the case. Cards for his reporting are to be had of all health officers.

2. On receipt of the report of the practicing physician the health officer having jurisdiction (whether city or county), must immediately report the case to the State Board of Health on franked postal cards, which are supplied him as he may request, and which require no postage.

3. In the next place, all city health officers (except those of cities of the first class), must report weekly to the county health officer on communicable diseases in their cities. This is because the county health officer is the immediate superior of the city health officer, and because the county health officer, having direct control and supervision over communicable diseases in his county outside of incorporated cities, must know what exists inside the cities of the county in order to give better protection to the country districts. The county health officer gets these reports for his own information that he may have a comprehensive grasp of the situation in his own county at all times, and does not make a duplicate report of them to the State Board of Health. It will be remembered that the city health officer is required to immediately report his cases to the State Board of Health as soon as reported to him.

4. At the end of each month every health officer (city or county), must make his monthly report by the tenth of the month following, of all communicable diseases in the territory within his jurisdiction. Addressed return mailing cards are sent each health officer from the State Board of Health for this purpose each month. The county health officer must bear in mind that his reports must cover only cases in the country districts outside of incorporated cities, and that all the city health officers will report their own totals to the State Board of Health. These final monthly reports are for the purpose of checking back again the actual epidemiological cards received and of estimating the totals of each disease for the year.

Briefly, then, the system is as follows:

The practicing physician makes report to the health officer having jurisdiction. He, in turn, sends complete individual epidemiological data at once

to the State Board of Health, and at the end of the month, sends in also his monthly report. In addition, the city health officers, (except in first class cities), keep the county health officers informed weekly of the status of communicable diseases in their cities, so that this official may have proper information to guide him in his own work. This information having already gone to the State Board of Health, is not included by the county health officer in his monthly report.

The value of prompt and complete notification to the health officials of the State are:

1. To serve as a rough gauge of the efficiency of local departments.
2. To aid in epidemiological studies, both intensive and extensive.
3. To aid in the supervision of the adequacy of local measures to control communicable diseases.
4. To enable this department to give to health officers, physicians and families afflicted, information concerning the management and prevention of communicable diseases.
5. To enable the department to have full and correct statistical data.

The importance of getting full reports, therefore, is easy to see, and much time and effort has been devoted to this end.

When the government called together great numbers of men for war purposes in the cantonments, naval stations, spruce camps, shipyards and war industries, its first consideration was for the health of these men. An early request was made that this department furnish full and regular information to the government of the prevalence of communicable disease in all sections of the State from which these men were arriving. In conformity with this request it was very gratifying to be able to furnish every week a detailed list of communicable diseases in every section of the State. This list was sufficiently comprehensive to be of great value to them. Guided by the information thus obtained they were able often to so handle men coming from infected localities as not to permit them to be a source of danger to their companions. Furloughs, too, were granted with reference to this report. Often enough a new man would come down with scarlet fever or measles in a large barracks and expose 100 or 200 men over night, but much of this it was possible to prevent and the information we gave was invaluable.

The following is a comparative tabulation of the total number of cases and deaths from the principal communicable diseases for the five years, 1913-1917 inclusive:

	1913		1914		1915		1916		1917	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Typhoid fever.....	1,027	138	733	149	827	121	583	78	986	121
Diphtheria.....	509	43	459	44	389	38	382	35	426	48
Scarlet fever.....	811	30	785	22	602	7	654	14	1,019	22
Measles.....	5,365	92	4,381	49	1,486	16	17,138	78	17,244	203
Whooping cough....	695	114	410	60	1,850	43	3,417	77	1,492	126

In view of migratory conditions of our population since the war began, the large movements of drafted men and troops, the coming and going of harvest hands, and the over-crowding of some of our cities incident to ship-

building and other war industries, it would not be illogical to expect that there would occur a considerable increase in the incidence of these diseases during the latter part of 1917 and during 1918. I think that a compilation of the 1918 statistics will show this to be true. They are not yet available for this report.

II. The New Department of Venereal Diseases

At a special meeting of the Board on December 17th, 1917, syphilis, gonococcus and chancroid infection were declared "dangerous, contagious and infectious diseases;" and at a regular meeting of the Board January 4th, 1918, regulations were adopted regulating the control of these diseases.

The work entailed by these regulations logically fell to this department. Lack of funds for several months effectively prevented much that was contemplated by the Board. For some time it was not possible to employ a competent bacteriologist, equip the laboratory for Wassermann work, send out educational literature or even furnish physicians with instruction blanks for their patients.

Almost from the beginning, however, the larger cities of the State, basing their authority on this regulation, were able to deal rigidly with the venereal evil, especially among disorderly persons, both male and female.

Under Section 5546, Remington & Ballinger Code, attorneys began to appeal to the State Board of Health on the question of diagnosis in behalf of clients held in quarantine, under treatment for venereal diseases, after every other recourse at law had been exhausted. In all there were 40 or 50 of these appeals. Clinical findings and laboratory examinations were relied on and the necessary examinations of patients had to be done with great care. In no case was it found that a local health officer had erred in his diagnosis. Fortunately for the department, these appeals were from Seattle and Tacoma, both close at hand. Eventually some attorney appealed to the Supreme Court on the question of the finality of the decision of the State Board of Health in the case of a disputed diagnosis. Since this decision was rendered in our favor few appeals have been taken.

In accordance with the Chamberlain-Kahn bill, Surgeon B. W. Brown of the United States Public Health Service, was detailed for duty in this office to organize a division of Social Hygiene and to carry on a state-wide campaign for the control of venereal diseases. This division consists of one officer of the United States Public Health Service, a woman social worker and a stenographer and clerk. This work is to be a permanent part of the State Board of Health and will be financed until July 1st, 1919, by an appropriation under the Chamberlain-Kahn bill. After July 1st, 1919, the legislators will be asked to put up dollar for dollar with the Government to meet the expense of this division. Work has been commenced in the following cities with more or less success: Bellingham, Everett, Seattle, Tacoma, Bremerton, Vancouver, Olympia, Aberdeen, South Bend, Raymond, Yakima, Walla Walla and Spokane.

III. Anti-Typhoid Efforts

Typhoid fever prevails throughout the entire State, but for many years has been worse in certain sections where conditions have been favorable to its existence. The country around and including Walla Walla, the Wenatchee river valley country (including Wenatchee), the Yakima river valley and the lower Skagit river valley have been great sufferers.

The practice of emptying sewage into streams, on the one hand, and the use of water from these same streams for domestic purposes, on the other hand, prevails. I know of no place in these four sections where water taken from contaminated sources is properly purified before being used for human consumption, nor do I know of a place in these sections that has hesitated to use any stream passing through as a sewer if it was convenient to do so; the pleadings, warnings and advice of the State Board of Health to the contrary notwithstanding. Furthermore, this same contaminated water is used largely in most of this territory for irrigation purposes. Nearly always the ditch water is used for domestic purposes, all the way from washing vegetables and milk vessels in it to actually drinking it. It is a fact that many farmers in the irrigated areas can get no other supply of drinking water.

My observations, therefore, have led me to conclude that, while the greater number of typhoid cases in the State are contact cases spread by insanitary toilets, flies, contaminated food and milk, personal contact with the sick, etc., the importance of impure water supplies and the use of ditch water for domestic purposes is far greater than the number of cases from this source would indicate. It is the leaven that leavens the whole lump and, generally speaking, from this lesser class of cases arises directly or indirectly most of the larger class of contact cases. Witness the fact that the typhoid rate in Washington by localities varies directly with the extent of contamination of the ditches and the water supplies.

In the lower Skagit river valley there was a sharp outbreak of typhoid in January, 1918, following flood conditions. Survey of the situation and recommendations were made by this department. Warning had been given by City Health Officer Brown, Mount Vernon, that doubtless lessened the number of cases. No effective measures to obtain a pure drinking water supply have been taken and a recurrence of typhoid outbreaks may be expected there at any time.

In Yakima county, where there is a whole-time health officer, large amounts of anti-typhoid vaccine has been given and considerable educational work done.

In Wenatchee nothing of value has been done in regard to the water supply. In Chelan county, Dr. Culp, county health officer, has done fine work. He has conducted a campaign of education through the papers, the schools and the County Defense Council, and has distributed much literature through the merchants and the Commercial Club of Wenatchee. He has worked hard on sanitation in the country districts, and especially directed his efforts against insanitary conditions along the ditches. He has used and persuaded his fellow practitioners to use typhoid vaccine very extensively. His work is showing good results.

Nothing has been accomplished in and about Walla Walla.

It is a disgrace to the State of Washington that in the five years 1913-1917 inclusive, we have sacrificed 607 lives to a disease sanitarians know so well how to prevent.

IV. German Measles

On January 1st the first epidemic of German measles that has prevailed in the State for many years was at its height. Since that date 12,474 cases have been reported. This disease is a mild eruptive disease very much resembling mild scarlet fever. The physicians of the State, as a rule, had

not seen a case in many years. Much confusion arose in various parts of the State by mixing the two diseases. The rule of the State Board of Health requiring a two weeks' quarantine for German measles permitted health officers, where quarantine had been faithfully carried out, to inspect cases at the end of two weeks and check up again, when scarlet fever could be safely eliminated. If scarlet fever was found to have been the trouble then the case had been safely in quarantine.

It may not be inappropriate to add here that the machinery provided by which the State Board of Health must execute its quarantine orders and obtain its reports of the existence of diseases proved totally inadequate. This subject is discussed more at length under the next heading.

V. Influenza Epidemic

This pandemic made its appearance in Washington in the first week of October. In the history of the State Board of Health no such calamity has afflicted the State nor has so serious an emergency ever arisen. In the five years 1913-1917 inclusive, from the five most common contagious diseases, viz.: typhoid fever, scarlet fever, diphtheria, measles and whooping cough, there have been 1768 deaths. From influenza alone we have had to date well over 2000 deaths and the end is not yet. The toll will probably be double or treble 1768.

To meet such an emergency situation the State Board of Health has long realized that the machinery at hand and provided by the laws of the State was entirely inadequate.

It has realized that so far as having power to devise plans and give orders the legislature has not failed it. It has, however, for many years tried to have a "whole-time health officer law" passed under which whole-time civil-service and experienced health officers would administer the health affairs of the State by districts under the direct and uniform supervision of a central State Board of Health. Like a fire department a Health Department should have an adequate, full-time, trained force of fighters always at hand. Contagious disease sweeps like fire when once well started and like fire, must be effectually controlled. Our life is entitled to as adequate protection as our property.

The machinery of execution provided for the State Board of Health consists of county and city health officers. County health officers are appointed and paid by the County Commissioners. An unwise provision of our law permits the county physician to be also county health officer. By reason of being county physician, the county health officer has had to be on his county draft board. Yet the three jobs held by each of our county health officers have paid, as a rule, insufficient salaries to maintain them, and they have had to do private practice to supplement their salaries. Furthermore, health officers have been picked because of their qualifications to be county physicians and not with regard to their training in health work. Whole-time health nurses have never been supplied.

City health officers, except in Seattle, Tacoma, Spokane and Yakima, are part-time men. Their salary is often nothing or five dollars a month. They are appointed by their mayors and change frequently. They are not of our making and do not feel as if they have much responsibility to us. Their jobs pay little and their policy is to do as much as the pay justifies. In

justice to them it cannot be said that under such circumstances much is to be expected of them.

In addition to the facts set forth above, in regard to the machinery with which the State Board is required to do its work, the influenza epidemic found the State with many of its doctors in the military service and the ones at home overworked under normal conditions; so that the health officers, in addition to the work of their offices, were required to carry on heavy private practices and oftentimes neglected their public health work almost entirely. What good the State Board of Health has been able to do in this epidemic, it has been able to do mainly because of the dignity and prestige which attaches to the department and the weight which has been given its orders and recommendations by the people of the State acting, as a rule, willingly.

Had there existed the system of district, trained health officers, such as has long been thought essential by the Board, the story would have been different.

VI. Field Work—Representative Reports.

The following four reports of field work done in this Department are considered fairly representative:

March 7th, 1918.

Dr. T. D. Tuttle, State Commissioner of Health, Seattle, Washington;

Dear Doctor:—Forty-five cases of typhoid fever were reported by the health officer of Wenatchee from August 1st, 1917, to March 1st, 1918. Of these, nine were stated to have originated outside of the city and two were from East Wenatchee, not within the city limits, leaving thirty-four cases charged against that city, with two deaths. These cases were pretty evenly distributed over that time, except for December and February, when the cases reported were three and four respectively.

The monetary loss alone for 34 cases of typhoid fever with two deaths, I would place at about \$25,000; and such loss is not the major consideration. I would also make the observation that it is now considered that the removal of insanitary causes which bring about typhoid fever does away not only with typhoid fever but also with an amount of ill health equal to, or in excess of that due to this disease; so that in eradicating typhoid fever a locality really does itself two or three times the benefit that is casually apparent.

I, therefore, visited Wenatchee on February 28th, mainly for the purpose in view of investigating the cases sick at that time; so that, by getting the data on these and by adding to them the new cases that develop from time to time, I might in the future arrive at some conclusion as to the source of the trouble. While there I made an inspection of the water purification plant.

Of the four cases for February two were well and gone. No definite conclusions can be arrived at from the histories of the other two. No Widals had, as a rule, been made of the forty-five cases reported to the health officer and he was inclined to think that some of the cases reported to him as typhoid were, in reality not typhoid at all. Also, no accurate record was kept of the length of residence in Wenatchee before the onset of the disease in the cases of the imported harvest hands, so that some of the cases that had been designated as "outside cases" I am sure were really Wenatchee cases. I do not think thirty-four cases too high. I hope in the future to have Widals or good clinical histories on all new cases that develop and also definite knowledge as to where the disease was acquired.

The source of the water supply of Wenatchee is the Columbia river, just below the mouth of the Wenatchee river. There is, of course, constant pollution of both these streams. Typhoid fever is practically always present on both of them and generally not far above the Wenatchee intake. For example: During the time Wenatchee was having these cases, our records show eight cases in a town on the Wenatchee river, fifteen miles above the city; five cases in a town on the same river ten miles up; and cases in a town on the Columbia river only twenty miles above. Also thirty-five cases in Okanogan county developed during this time, mostly in

towns on the Columbia. These show the immediate typhoid pollution to which this supply is subject without taking into consideration conditions further up the Columbia. It could in no sense be considered a safe supply. I believe it is unwise to depend upon it no matter how treated, if there is any way of obtaining a safer supply.

To render this water reasonably safe would require far more than the present treatment with hypochlorite solution as the water enters the mains.

At the purification plant a uniform dosage of fifteen pounds of hypochlorite per million gallons is used. The hypochlorite now in use is taken from a large drum that is half used up and open to the air. Evidently the lime ate its way through the container some months ago, so that it has no doubt lost most of its strength. No allowance is made for this increased dosage when the water is turbid, though a very much larger dose should be used at such times. In fact, accurate tests on the required amount of chlorine necessary to purify water apparently uniform as to its purity have showed variations as high as 150% in two or three hours. In other words, the purity of water very likely varies from hour to hour and very certainly is much worse during flood times. Also, during flood times so much organic matter is present that it is a question whether the chlorine kills all the organisms, since it may be used up in combining with other organic matter present. Very close and frequent examinations of water are necessary to be at all accurate in the use of chlorine in a water of varying purity.

Water should also be allowed to stand for at least an hour after being treated with chlorine to give ample time for the chemical to act. In Wenatchee the system is such that the water is pumped into the mains immediately after the solution is added. The custom is to pump directly into the mains for about six hours per day. The surplus overflows into a reservoir in the town and when enough water has accumulated, the pumping is discontinued for that day. It is only during the pumping that the water is pumped too soon to the users. I am told that often the chlorine taste is complained of, and this probably is the explanation. If the water is pumped directly to the reservoir and then allowed to flow by gravity to the town, the chlorine would then have sufficient time to act.

The best and safest thing for Wenatchee to do would be to get an uncontaminated supply and abandon the use of the river altogether. Chlorine treatment is at best, only an emergency method. Unless scientifically and daily checked by bacteriological examinations it is very liable to failure, first knowledge of which is an epidemic of sickness among the water users. Of course, it is much better than nothing.

A very great improvement would probably come from the use of liquid chlorine instead of the hypochlorite solution, so subject to variations in strength. As is well known, the hypochlorite solution is hard and disagreeable to mix, eats out wooden containers rapidly, and is altogether cumbersome to use. Its efficiency depends, to a large extent, on the faithfulness and intelligence of the person in charge. Liquid chlorine under pressure and released automatically is better and there is no question of loss of strength by exposure to air, and calculations as to the amount used are more accurate. By varying the amount of liquid chlorine in accordance with the variation in the water and by checking up with frequent bacteriological examinations, the supply would be more uniformly benefited.

If the city persists in the use of the Columbia river water, it should do better than simply treat it with chlorine. Storage and rapid sand filtration, followed by slight chlorination, would be the best method and would make the water almost safe.

I have no doubt that the water supply has contributed very largely to the typhoid situation in the city of Wenatchee.

(Signed)

Respectfully,

J. E. Henry, Epidemiologist.

Copy of this report was sent to the Superintendent of the City Water Department of Wenatchee.

February 25, 1918.

Dr. T. D. Tuttle, Commissioner, State Board of Health, Seattle, Wash.;

Dear Doctor:—I beg to report the findings during my trip to Walla Walla, February 19th to 21st, to investigate a small outbreak of diphtheria in that city.

I found three cases in quarantine for diphtheria and five cases under provisional quarantine awaiting bacteriological report from the State Board of Health Laboratory.

Of the three cases considered as definitely diphtheria, one was a school teacher who came to school Monday, February 11th, and fortunately was seen by the health officer, who is also school physician. He considered her case suspicious and immediately placed her in a local isolation ward. Three days later a serious case developed from the room of the teacher and was immediately isolated and quarantined at home. The third case was one that had been in quarantine for about three weeks.

I made bacteriological examinations of all cases, whether held as true cases or under suspicion. The three cases under quarantine I found positive. The five cases under provisional quarantine I found negative. I also made cultures from about 30 school children showing inflamed throats and from all grades. Inspection of all the children from the school in which the two recent cases developed was made by the health officer and myself, the cultures being made, as I said, from all suspicious throats. None of these cultures were positive.

I found that it took three days to get a report from the State Board of Health Laboratory, and that persons under suspicion, of necessity, were held in quarantine for that length of time before their cases could be acted upon. I found that there is at least one local private laboratory fully capable of making culture examinations for diphtheria. I, therefore, strongly recommended to the health officer and Mayor that arrangements be made at once to have this work done in Walla Walla.

The health officer of the City of Walla Walla, Dr. W. M. Van Patten, receives no salary, although the population of the city is about 25,000, exclusive of a large surrounding suburban population. This seems inconceivable but is a fact and I believe will eventually result in sorrow to that city. The health officer is to be commended for the service he is giving the city free, but I do not believe the city can hold such a man very long without paying him an adequate salary.

Respectfully submitted,

(Signed)

J. E. Henry, Epidemiologist.

September 18th, 1918.

On September 9th and 12th I investigated an outbreak of typhoid fever at the camp of the Gardner, Woolley Lumber Company, (town office, Peyton Building, Spokane.)

I found that there were at least eleven cases at that time and numerous cases of diarrhea. Eight of the typhoid cases I visited in Spokane where they were ill, and there gathered data which I supplemented by personal inspection of the camp and vicinity on September 12th.

The camp is a new one, 25 or 30 miles from Spokane, and is reached by automobile. There were at work about 80 loggers and 20 or 25 mill men. The population is not very permanent but the loggers have been the more transient. The mill was finished and operations were begun about the middle of July. Logging has been going on since about June 1st.

The mill is reached first from down stream and is on a small creek which is dammed for a mill pond. About 100 yards up stream from the mill is a large stable for horses and immediately above is a pig pen. Two hundred yards above the stable are located the bunk houses, kitchen, and eating house and the meat house.

About the last of June there began to be some diarrhea and intestinal troubles among the men. This gradually increased through July, and after the first of August there began to be cases which proved to be typhoid fever. Eleven frank cases of typhoid fever are known. How many others among transients have escaped our notice, or as mild cases have carried their troubles to other camps, I do not know.

The investigation was conducted with reference to the following factors:

1. Files.
2. Toilets.
3. Water supply.
4. Milk supply.
5. Carriers among the cooks.
6. Other factors as clues might arise.

A very consistent history was obtained that most of the trouble had been among the mill men, though they were outnumbered 25 to 80. Nine of the 11 known cases were mill men. Eating and sleeping accommodations were in common for all the men, but during the day, of course, the loggers were in the woods and the mill men at the mill.

It was assumed, therefore, that factors (4) milk supply, and (5) carriers among the cooks, since they were common to both mill men and loggers, were probably not causative. This assumption was borne out by the information that the milk used was canned milk, and that the entire force of cooks had been changed every two or three weeks.

It was found that the water supply of the camp was as follows:

1. Mill spring across creek about 25 yards distant from the well.
2. Cook house, kitchen and bunk houses—deep spring from excavation in hill-side above bunk house.
3. A spring beside road leading into woods was much used by the loggers on their way to and from work and to fill their water bags.
4. Creek water sometimes used.
5. Water from a branch emptying into creek near bunk house sometimes used.

Supply No. 1. The mill spring is subject to gross pollution. It is supplied by a small stream which is at the foot of a depression or gulch between the two hills across the creek and opposite the mill. The stream does not appear on the surface above the spring but the ground is wet in the bottom of the gulch and water can be obtained by digging down. The sides of the gulch were logged early in the operations during June and July. No precautions were taken to provide movable woods toilets; the men in the woods relieved themselves in the bushes at the bottom of the gulch. The men at the mill generally sought the shelter of the bushes and brush up this gulch above the mill for the same purpose. The county health officer inspected the camp about August 25th and reached the same conclusion in regard to this spring. He had an analysis made of the water from it which showed it contaminated with feces. It was very properly ordered closed by him. Accordingly, the pipe which led from it into the mill was disconnected. The spring is still undisturbed and the indications are that it is still used by the men to some extent. It has not been posted as dangerous by a sign at the spring, but notice to that effect has been placed on the bulletin board at the bunk house.

Supply No. 2, that for cook house and bunks, does not appear subject to contamination. The stream is small, however, and if there were ever any contamination the concentration would be great. Its purity could only be determined by bacteriological examination. Samples of this spring were taken and the laboratory reported it contaminated.

Supply No. 3, from which the loggers get water for their water bags, is subject to pollution in that the area covering the drainage into this spring was cut over by the loggers without any precautions to prevent its pollution with the feces of the men. The sample taken by the county health officer, I was told, showed no contamination. This water may not yet have become contaminated but when the fall rains set in, or even before, feces may get into it. I do not consider it safe. It also has a very small flow.

Supply No. 4. The branch is subject to gross pollution and was found contaminated by the county health officer. It has the drainage from a large area logged off recently without precautions against contamination by feces. This water has been posted as unsafe to use.

Supply No. 5. Grossly unsafe below the bunk house. It gets the branch water of Supply No. 4 and will soon get the seepage from a septic tank between it and the bunk house. It has not yet been posted as unsafe. It is unsafe for both drinking and bathing purposes. It is used for bath water. The valley of the creek above the bunk house has not yet been logged and is uninhabited except by one family, a mile and a half above. This family is at a considerable distance, probably 500 yards, from the stream, and I do not think constitute any danger. This supply has not been used. A sample was taken of it and the laboratory reports it uncontaminated.

Flies abound to an unusual degree. The stables I found uncleaned and with a large accumulation of manure piled on the outside. This is the fly-breeding place and from it flies go to all parts of the camp. Two sanitary toilets have been recently installed in the bunk house, the effluent of which is treated and empties into a cess-pool. (It remains to be seen whether this cess-pool may not itself become a future menace.) At the mill one such sanitary toilet is provided. Besides these there are two outside toilets within a few yards of the cook house and kitchen. Though some attempt was made at the time of construction at fly-proofing them, they are really open toilets. The kitchen is far from fly proof. Flies have free

access to both the foods placed for the men to eat and to the contents of the open privies, and they were crawling over both and swarming from one to the other in great numbers. It is easy to see how a man who has a mild diarrhea or typhoid, or who has recovered from either of these diseases and still carries germs in his feces, would deposit these germs by the millions in the privies, and how flies would carry them on their feet to the food that is eaten.

My opinion of the situation in this camp is, therefore, that typhoid and dysentery were in all probability introduced from contaminations of the drinking water by the logging crews when they cut over the areas draining the springs, and by the practice of the men of defecating in the woods. The mill spring I consider the worse and this probably accounts for the greater proportion of trouble among the mill men. Once present in a camp with such a fly situation as is prevalent there, the typhoid was, undoubtedly, spread, and will undoubtedly continue to be spread, by the flies, even if a pure water supply is gotten, unless the flies are gotten rid of and the privies and cook houses are screened.

I recommend, therefore, that detailed instructions be given this lumber company as to sanitary measures needed as follows:

1. A pure water supply. The best available supply is the creek above the bunk house. It should be piped down from an intake several hundred yards above the bunk house. This supply should furnish abundant water for drinking, cooking and bathing purposes. The stream above the intake should be posted warning trespassers not to contaminate the stream as it is used for drinking supply. This supply should not be continued in use after logging operations are begun above the intake without the advice of the sanitary department of the State Board of Health.

2. Men should be required absolutely to use toilets and privies provided for their use. These should be provided on the basis of one seat for each eight men. Privies should be built fly-proof absolutely and so kept. Doors screened, fly-tight covers on seats. Contents should be limed heavily once a week.

3. Cook house, kitchen and meat house should be made at once absolutely fly-tight and kept clear of flies at all times.

4. Last, but not least, manure should be removed from the stable once at least every five days. It should be burned or taken a mile or more from camp. The floor of the stable so arranged that every particle of manure can be cleanly moved each five days. It takes the fly egg over five days to mature and if every particle of manure is burned or carried away before the fly crop in it develops, the fly nuisance will be materially reduced.

One of the owners, Mr. Woolley, says that the health situation at his camp has become so serious that he fears if it continues he will be unable to get men. This is undoubtedly true. He is willing, therefore, to do everything in his power to make his camp sanitary, and he wants you to give him explicit information as to what caused this trouble and what he can do to remedy it. If you will do this I think that he will co-operate fully.

(Signed) J. E. Henry, Epidemiologist.
April 12, 1918.

Dr. T. D. Tuttle, Commissioner, State Board of Health, Seattle, Washington;

Dear Doctor:—On the 11th of April I went to Kent at the call of the health officer of that city, who stated that he had begun to fear that the physicians in Kent, as well as himself, were making mistakes in their diagnoses of German measles, in that cases so diagnosed were apparently turning out to be scarlet fever, and he wished me to see a number of these cases and pass my opinion on them.

In company with Dr. McGregor, city health officer, Dr. Hoffman, a practitioner there, and Dr. Sparling, county health officer, I accordingly saw six or eight of these cases and was able to conclude that undoubtedly the mistake in diagnosis had been made.

Dr. Sparling took up the matter of revisiting the cases of German measles and re-classifying them all, and also the question of proper quarantine measures, etc., to be adopted.

This differential diagnosis between German measles and scarlet fever has been a very important matter in the control of communicable diseases in Washington during this year. There has existed very little German measles in this State during recent years and the tendency among the physicians first was to call German measles scarlet fever. Then, when it became known that German measles was

generally prevalent throughout the state, the tendency was to call the mild scarlet fever cases German measles, overlooking the fact that some mild rashes might be scarlet fever. As a matter of fact, the diagnosis between the two diseases is very difficult and often several days must elapse before it can be made. During this time precautions against scarlet fever must be taken. In some localities this mistake led to serious consequences. In others, by chance, no harm has yet resulted, the diagnosis of German measles having, fortunately, been correct.

Respectfully,
(Signed) J. E. Henry, Epidemiologist.

CAMP SANITATION.

The usual sanitary inspection of camps in the State has been carried on by the State Board of Health during the last biennium. In addition to this, through the influence of the Spruce Production Division of the United States Army, the sanitary conditions in a large per cent of our lumber camps have been materially improved. The work of this division not only resulted in improving sanitary conditions of many of our lumber camps, but it was thoroughly demonstrated that improved sanitary conditions so increases the productiveness of labor that we are confident that those camps that have come under the influence of this intensive sanitation will continue to maintain the highest sanitary standard for their employees.

A detailed statement of inspection made by Sanitary Inspector T. R. Wilber follows:

REPORT OF SANITARY INSPECTOR.

T. R. WILBER.

Dr. T. D. Tuttle, State Commissioner of Health, Seattle, Washington;

A report of the field work done by me from October 1st, 1916, to October 1st, 1918, is herewith presented:

The field work done during this period consisted largely of investigations of insanitary conditions in industrial camps, outbreaks of diseases, answering calls from local health officers and city officials, surveys of water supplies and taking water samples, looking after field work of the Bureau of Vital Statistics, rearranging vital statistics registration districts, prosecuting physicians and undertakers for failure to report births and deaths, appointing new registrars, etc.

In addition to the field work, considerable time has been spent in routine office work, the greater part of January and February, 1918, being devoted to assisting agents of the U. S. Census Bureau in making a check of the birth registration of this State. The latter part of December, 1916, was spent in acting as guard, as far as New York, for a Greek leper who was being deported.

Places investigated and the purposes of the investigation as follows:

1916	
Oct. 2.	Sanitary survey of Centralia.
Oct. 3.	" " " "
Oct. 4.	" " " "
Oct. 5.	Chehalis. Vital statistics.
Oct. 6.	Kelso. " "
Oct. 11.	Raymond. Water supply.
Oct. 12.	" " "
Oct. 13.	" " "
Oct. 18.	Port Orchard. Vital statistics.

- Nov. 8. Ronald. Water supply.
 Nov. 14. Ellensburg. Vital statistics, water and general.
 Nov. 15. Sunnyside. Vital statistics.
 Nov. 16. North Yakima. Vital statistics and water.
 Nov. 20. Skagit County. Making new registration district.
 Visited Mt. Vernon and Burlington.
 Nov. 21. La Conner, Edison, Bow and Blanchard.
 Nov. 22. McMurray and Big Lake.
 Nov. 23. Clear Lake, Sedro Woolley and Lyman.
 Dec. 12. Vancouver. Water, vital statistics and general.
 Dec. 13. Portland. Vital statistics.
 Dec. 14. Fallbridge. Water.
 Dec. 15. Walla Walla. Vital statistics and general.
 Dec. 15. Dayton. Vital statistics and water.
 Dec. 16. Departed for New York with leper.
 1917
 Jan. 15. Wilbur. Vital statistics.
 Jan. 16. Harrington. Vital statistics and general.
 Jan. 16. Davenport. Vital statistics.
 Jan. 17. Reardan. Vital statistics and general.
 Jan. 18. Spokane. Water.
 Jan. 19. Othello. Water samples.
 Jan. 19. Beverly. Water samples.
 Jan. 19. Ellensburg. Water samples.
 Jan. 19. Cle Elum. Water samples.
 Jan. 25. Auburn. Typhoid outbreak.
 Jan. 30. Everett. Vital statistics.
 Feb. 6. Bothell. Vital statistics.
 Feb. 12. Cle Elum. General.
 Feb. 13. Lind. Sewage disposal.
 Feb. 14. Spokane. Vital statistics.
 Feb. 23. Bellingham. Vital statistics and water.
 Mar. 1. Roy. Vital statistics.
 Mar. 1. Rainier. Vital statistics.
 Mar. 2. Lebam. Vital statistics.
 Mar. 2. Logging camp. Insanitary conditions.
 Mar. 5. Everett. General.
 Mar. 8. Tacoma. Vital statistics.
 Mar. 26. Mt. Vernon. General.
 Mar. 27. McMurray. Typhoid fever.
 Mar. 27. Alger. Insanitary conditions at logging camp.
 Apr. 2. South Bend. Vital statistics and general.
 Apr. 3. Raymond. General.
 Apr. 5. Olympia. Re-arranging bulletin with State Printer.
 Apr. 6. Olympia. Re-arranging bulletin with State Printer.
 Apr. 12. Spokane. Conference of Undertakers.
 Apr. 12. Moab. Vital statistics.
 Apr. 13. Greenacres. Vital statistics.
 Apr. 13. Deer Park. Vital statistics.
 Apr. 14. Kelso. Vital statistics.
 Apr. 14. Freeman. Vital statistics.
 Apr. 14. Medical Lake. Vital statistics.
 Apr. 14. Cheney. Vital statistics.
 Apr. 17. Republic. Water, vital statistics and general.
 Apr. 19. Nine Mile. Vital statistics.
 Apr. 19. Hillyard. Vital statistics.
 Apr. 19. Pasco. Vital statistics.
 May 2. Snohomish. Insanitary conditions, G. N. depot.
 May 13. Walla Walla. Vital statistics.
 May 14. Waitsburg. Typhoid fever.
 May 15. Eureka. Vital statistics.
 May 16. Pasco. Vital statistics and general.
 May 16. Kennewick. Vital statistics.

- May 17. Mt. Vernon. Vital statistics.
May 17. Sedro-Woolley. Vital statistics.
May 17. Burlington. Vital statistics.
May 18. Chehalis. Vital statistics.
May 22. Pateros. Vital statistics and general.
May 22. Twisp. Vital statistics and general.
May 22. Malett. Vital statistics and general.
May 22. Omak. Vital statistics and general.
May 22. Methow. Vital statistics and general.
May 22. Wauconda. Vital statistics and general.
May 23. Okanogan. Vital statistics and general.
May 23. Riverside. Vital statistics and general.
May 23. Tonasket. Vital statistics and general.
May 24. Entiat. Vital statistics and general.
May 24. Wenatchee. Vital statistics and general.
May 31. Logging Camp on Snohomish watershed.
June 1. Wenatchee. Vital statistics.
June 2. Wenatchee. Vital statistics.
June 5. Yakima. Vital statistics and general.
June 6. Yakima. Vital statistics and general.
June 8. Logging Camp on Snohomish watershed, in company with Dr. Tuttle.
June 11. Vancouver. Vital statistics.
June 12. Vancouver. Vital statistics.
June 15. Stevens-Bird Logging Camp. Typhoid fever outbreak.
June 18. Spokane. Conference of City and County.
June 19. Spokane. Health Officers.
June 22. Orting. Vital statistics.
June 25. Chehalis. Vital statistics.
June 26. Onalaska. Vital statistics, new district.
June 26. Tono. Appointed new registrar.
July 2. Nagrom. Tacoma water supply.
July 5. Des Moines. Vital statistics.
July 5. Vashon. Vital statistics.
July 9. Centralia. Garbage disposal.
July 12. Yakima. Stream pollution by city.
July 13. Yakima. Stream pollution by city.
July 14. Yakima. Stream pollution by city.
July 16. Camp Lewis. Sanitary conditions outside military reserve.
July 18. Foster. Vital statistics.
July 18. Riverton. Vital statistics.
July 20. Port Orchard. Vital statistics.
July 23. Kent. Sanitary condition.
July 23. Enumclaw. Vital statistics.
July 23. Buckley. Vital statistics.
July 24. North Bend. Vital statistics.
July 24. Issaquah. Vital statistics.
July 25. Walla Walla. Water supply.
July 26. Walla Walla. Survey of Watershed.
July 30. Everett. Vital statistics.
Aug. 13. Moclips. Water supply of Smith Shingle Co.
Aug. 15. Wenatchee. Vital statistics.
Aug. 17. Ritzville. Vital statistics.
Aug. 22. Vancouver. Prosecuting undertakers.
Aug. 22. Washougal. Water supply.
Aug. 23. Ridgefield. Vital statistics.
Aug. 29. Everett. Vital statistics.
Aug. 30. Dupont. Sewage disposal of school and depot.
Aug. 31. Olympia. Consulting Attorney General.
Sept. 4. Walla Walla. Vital statistics.
Sept. 5. Walla Walla. Vital statistics.
Sept. 11. Aberdeen. Prosecuting physicians.
Sept. 12. Hoquiam. Prosecuting physicians.
Sept. 14. Reardan. Vital statistics.

- Sept. 16. Northport. Water supply.
Sept. 18. Yakima. River pollution by city.
Sept. 19. Yakima. Water samples.
Sept. 20. Yakima. Water samples.
Sept. 21. Cle Elum. Water samples.
Sept. 24. Camp Lewis. With Dr. Tuttle.
Sept. 26. Puyallup. Vital statistics.
Sept. 27. Port Orchard. Vital statistics.
Oct. 8. Glacier. Water supply.
Oct. 16. Yakima. Water samples.
Oct. 17. Yakima. Water samples.
Oct. 31. Walla Walla. Para-typhoid at the State Penitentiary.
Nov. 9. Monroe. Water supply.
Nov. 12. Walla Walla. General.
Nov. 13. Colfax. Vital statistics.
Nov. 14. Spokane. General.
Nov. 21. Tacoma. Vital statistics.
Nov. 22. Montesano. Typhoid fever.
Nov. 23. Aberdeen. Vital statistics.
Nov. 23. Hoquiam. Vital statistics.
Nov. 28. Camas. Boat camps.
Dec. 6. Aberdeen. School House sanitation.
Dec. 17. Renton. Vital statistics.
Dec. 21. Hoquiam. Vital statistics and general.
Dec. 27. Everett. Vital statistics.
Dec. 31. Tacoma. Vital statistics.
1918
Jan. 7. Olympia. Vital statistics.
Jan. 9. Winlock. Vital statistics.
Jan. 22. Chehalis. Vital statistics.
Jan. 30. Stampede. Tacoma watershed.
Jan. 31. Nagrom. Tacoma watershed.
Feb. 23. Port Orchard. Survey of watershed.
Mar. 15. Eagle Gorge. Page Lumber Company's camp.
Mar. 20. Monroe. State Reformatory water supply.
Mar. 25. Raymond. Sanitary condition of State Fish Hatchery.
Apr. 4. Walla Walla. Vital statistics—Prosecutions.
Apr. 6. Spokane. General.
Apr. 10. Bellingham. Vital statistics—Prosecutions.
Apr. 11. Maple Falls. McKnight Logging Company—Sanitary survey.
Apr. 12. Ferndale. Vital statistics. New districts.
Apr. 12. Blaine. Appointed new registrar.
Apr. 29. Burlington. Sewage disposal.
May 6. Kelso. Vital statistics.
May 6. Vancouver. Vital statistics.
May 7. Walla Walla. Vital statistics and water supply.
May 9. Tekoa. Vital statistics.
May 10. St. John. Vital statistics and water samples.
May 10. Thornton. Vital statistics.
May 11. Rosalia. Vital statistics.
May 13. Colville. Vital statistics.
May 13. Addy. New registration district.
May 13. Valley. New registration district.
May 14. Myers Falls. New registration district.
May 15. Chewelah. New registration district.
May 15. Spokane. Conference of Undertakers.
May 28. Aberdeen. Vital statistics.
May 28. Montesano. Typhoid fever. Milk camps.
May 29. Everett. General.
June 5. Concrete. Sanitary survey.
June 11. Port Gamble. Vital statistics.
June 13. Index. Vital statistics. Appointed new registrar.
June 17. Davenport. Vital statistics and general.

- June 17. Creston. Vital statistics and general.
- June 17. Wilbur. Vital statistics and general.
- June 17. Almira. Vital statistics and general.
- June 18. Hartline. Vital statistics and general.
- June 18. Coulee City. Vital statistics and general.
- June 18. Waterville. Vital statistics and general.
- June 18. Wenatchee. Vital statistics and general.
- June 19. Trinidad. Vital statistics and general.
- June 19. Quincy. Vital statistics and general.
- June 19. Ephrata. Vital statistics and general.
- June 19. Wilson Creek. Vital statistics and general.
- June 19. Krupp. Vital statistics and general.
- June 19. Odessa. Vital statistics and general.
- June 20. Sprague. Vital statistics and general.
- June 21. Spokane. Vital statistics and general.
- June 24. Deer Park. Vital statistics and general.
- June 24. Springdale. Vital statistics and general.
- June 24. Valley. Vital statistics and general.
- June 25. Chewelah. Vital statistics and general.
- June 25. Addy. Addy. Vital statistics and general.
- June 25. Colville. Vital statistics and general.
- June 25. Myers Falls. Vital statistics and general.
- June 26. Kettle Falls. Vital statistics and general.
- June 27. Cle Elum. Sanitary conditions of tent colonies.
- July 5. Timber Valley. Sanitary conditions of mill camp.
- July 11. Bellingham. Water samples and vital statistics.
- July 22. Raymond. Water samples.
- July 30. Cle Elum. Sanitary conditions.
- Aug. 5. Graham. Cascade Timber Company's camp survey.
- Aug. 29. Index. Stream pollution.
- Sept. 3. St. Martin's Spring in company with State Hotel Inspector.
- Sept. 4. Cathlamet. Vital statistics.
- Sept. 9. Carbonado. Investigated insanitary conditions.
- Sept. 9. Wilkeson. } In company with Dr. Harrison, County health officer
- Sept. 9. So. Prairie. } of Pierce Co., and Dr. Woolsey of the United
- Sept. 9. Burnett. } States Public Health Service.
- Sept. 20. Leavenworth. Reported typhoid fever.
- Sept. 24. Edmonds. Vital statistics. Appointed new registrar
- Sept. 26. Lake Cushman. Sanitary inspection of Phoenix Logging Co.'s camp

BIRTH REGISTRATION

During the biennium under consideration a large amount of work has been done by the department in improving the registration of births in the State.

During the summer of 1917 and winter of 1918 a nurse was employed to make a house-to-house canvass in various cities of the State, selecting cities of medium size rather than our three larger cities. The work of this nurse revealed that a large number of births were not being reported and served very materially in stimulating those required to report births in complying with the requirements of the law relative thereto. This work so improved the registration of births in the State that the Commissioner felt justified in asking admission to the Registration Area of the United States for births, we having been admitted several years ago to the registration area of deaths. Application was accordingly made to the United States Census Bureau. In January, 1918, two representatives of the Census Bureau were sent to the State and a thorough test of the birth returns of the State made. We had estimated that we were getting over 90% of the births in the State

(90% being the required standing for admission to the registration area). The test actually showed that we were making well over 93%, exclusive of Indian births, and over 92% including Indian births.

During the year 1917 we reported 24,170 births. A copy of each birth certificate is supplied to the United States Census Bureau, these copies being made under the direction of and at the expense of the Federal Government. We would like very much indeed to be able to supply the parents of each child in the State with a copy of the birth certificate. In order to do this it will be necessary to employ another clerk as such work would occupy practically the entire time of one employee.

The importance of birth registration has been demonstrated in what one might call a spectacular manner, through the workings of the army draft laws. If you could have been in the office of the State Board of Health during the last year and heard the moans, groans and the curses, because births had not been recorded, you would appreciate the importance of such records. Some desired copy of birth certificate to prove they were not of draft age: others to prove that they were of draft age; others to prove citizenship, and still others to prove their age in order to occupy positions with age limit requirements. It is advisable to present to you the importance of birth registration. It has been too well proven to require further consideration. The question that it is desired to present to you at this time is: Shall the parents of each child born in this State have a copy of the birth certificate? The parents want it, as demonstrated by the large number of calls from those who know that a birth certificate will be furnished on request, but the large majority of our people do not realize that they can secure a certificate on request, and these people are the very ones who are most apt to need a birth certificate, and, therefore, should be supplied through the action of our more highly educated classes; namely, our law-making bodies.

We submit the following tabulated statement of births that have occurred during the years 1916 and 1917:

CLASSIFICATION OF BIRTHS, 1916.

COUNTIES	SEX		COLOR					NATIVITY OF FATHER			NATIVITY OF MOTHER			Totals
	Male	Female	White	Black	Jap. or Chinese	Indian	Mixed or Others	Native	Foreign	Not Re-ported	Native	Foreign	Not Re-ported	
Adams.....	137	119	255	1	.....	.....	.....	170	86	.....	183	72	1	256
Asotin.....	66	65	131	.....	.....	.....	.....	116	12	3	120	9	2	181
Benton.....	88	86	183	.....	.....	.....	.....	186	16	2	198	18	1	154
Chelan.....	181	182	359	.....	1	1	1	315	44	4	339	23	1	363
Clallam.....	125	97	196	.....	2	15	10	167	55	.....	180	41	1	292
Clarke.....	231	219	500	.....	1	.....	.....	382	108	5	432	64	4	500
Columbia.....	93	79	172	.....	.....	.....	.....	161	10	.....	181	11	.....	172
Cowlitz.....	114	107	221	.....	.....	.....	.....	174	47	.....	183	36	.....	221
Douglas.....	152	116	262	1	2	.....	3	232	36	1	235	38	.....	268
Ferry.....	74	58	99	.....	.....	6	27	112	20	.....	118	16	1	108
Franklin.....	56	52	103	1	3	1	.....	91	16	1	92	16	.....	108
Garfield.....	57	53	115	.....	.....	.....	.....	108	7	.....	112	3	.....	115
Grant.....	109	96	263	.....	1	.....	.....	161	42	1	173	30	1	204
Grays Harbor.....	354	363	347	1	.....	7	3	451	256	5	468	216	8	712
Iceland.....	63	42	104	.....	.....	.....	.....	62	43	.....	66	39	.....	105
Jefferson.....	53	57	101	.....	1	.....	.....	80	30	.....	87	23	.....	110
King.....	562	552	999	2	140	2	4	604	534	6	669	471	4	1,144
Kittitas.....	219	185	395	1	13	4	.....	257	147	.....	268	135	1	404
Klickitat.....	198	192	381	5	1	.....	3	238	152	.....	248	142	.....	390
Lewis.....	107	111	212	.....	4	.....	.....	186	30	.....	193	22	3	218
Lincoln.....	383	323	695	.....	8	2	1	590	144	2	579	125	2	706
Mason.....	219	204	421	.....	.....	.....	.....	383	83	4	342	79	2	433
Moran.....	50	89	.....	.....	.....	.....	.....	67	22	.....	76	13	.....	89
Okanogan.....	189	174	349	.....	.....	.....	.....	303	60	.....	319	44	.....	383
Pacific.....	152	172	316	.....	5	1	2	208	112	4	233	91	.....	324
Pend Oreille.....	69	53	121	.....	.....	.....	.....	95	24	3	99	21	2	123
Pierce.....	355	314	569	1	65	3	1	382	284	8	411	258	.....	699
San Juan.....	49	48	88	.....	.....	.....	.....	73	23	1	78	18	.....	97
Skagit.....	355	309	618	.....	14	7	5	472	166	6	507	186	1	644
Skamania.....	22	24	45	.....	.....	.....	.....	85	10	.....	80	7	.....	46
Spokane.....	343	337	659	.....	5	11	6	561	224	5	513	164	3	680
Stevens.....	263	238	503	.....	3	.....	.....	413	92	2	436	80	.....	506
Thurston.....	235	198	408	1	.....	0	5	343	75	6	395	50	2	423
Wahkiakum.....	104	184	340	.....	8	.....	.....	204	53	1	233	64	1	243

CLASSIFICATION OF BIRTHS, 1918—Concluded.

[illegible]

CLASSIFICATION OF BIRTHS, 1917.

CITIES	SEX		COLOR					NATIVITY OF FATHER			NATIVITY OF MOTHER			Totals
	Male	Female	White	Black	Jap. or Chinese	Indian	Mixed or Others	Native	Foreign	Not Re-ported	Native	Foreign	Not Re-ported	
CITIES														
Bellingham.....	240	239	472	.....	5	1	1	325	148	6	359	119	1	479
Everett.....	275	236	501	4	6	.....	.....	348	161	2	370	140	1	511
Seattle.....	2,625	2,479	4,637	19	437	1	10	8,093	2,018	63	8,267	1,843	4	5,104
Spokane.....	1,106	1,065	2,140	9	20	1	1	1,633	504	34	1,774	306	1	2,171
Tacoma.....	878	714	1,609	12	65	4	2	1,061	623	8	1,158	533	1	1,692
COUNTIES														
Adams.....	143	130	272	.....	1	.....	.....	175	96	.....	192	81	.....	273
Asotin.....	54	61	114	.....	.....	.....	1	105	8	2	106	9	.....	115
Benton.....	83	97	178	.....	2	.....	.....	157	21	2	158	22	.....	180
Chelan.....	200	208	408	1	.....	.....	.....	361	46	1	381	27	.....	408
Chillam.....	119	97	195	.....	.....	20	1	171	42	3	180	34	.....	216
Clarke.....	309	226	535	.....	.....	.....	.....	440	94	1	465	77	3	535
Columbia.....	62	62	124	.....	.....	.....	.....	115	7	2	118	6	.....	124
Cowlitz.....	114	107	220	.....	2	1	1	181	39	1	184	36	1	221
Douglas.....	130	113	240	.....	1	1	17	211	82	.....	220	23	.....	243
Ferry.....	53	53	87	.....	1	1	.....	86	18	2	85	20	.....	106
Franklin.....	70	40	109	.....	1	.....	.....	98	12	.....	98	11	1	110
Garfield.....	73	58	131	.....	.....	.....	.....	120	11	.....	124	7	.....	131
Grant.....	92	91	183	.....	.....	.....	.....	136	46	.....	155	23	.....	183
Grays Harbor.....	450	375	806	.....	.....	14	5	590	246	10	604	218	3	825
Inland.....	52	55	107	.....	4	.....	.....	67	40	.....	73	33	.....	107
Jefferson.....	47	46	96	.....	.....	1	2	64	29	.....	72	30	.....	93
King.....	523	445	860	2	115	1	.....	546	418	4	586	352	1	928
Klickap.....	240	189	393	3	23	9	1	253	175	1	281	145	.....	429
Kittitas.....	213	186	397	1	.....	.....	.....	234	153	2	255	143	.....	399
Klickitat.....	82	85	166	.....	.....	1	.....	146	18	3	168	18	1	167
Lewis.....	377	375	746	.....	6	.....	.....	600	147	5	643	106	3	752
Lincoln.....	234	200	426	1	.....	.....	6	354	77	3	394	68	2	434
Mason.....	50	35	81	.....	3	2	.....	63	23	.....	69	17	.....	86
Okanogan.....	100	100	204	.....	.....	1	5	227	89	5	236	31	1	270
Pacific.....	161	171	295	.....	3	1	2	214	116	2	236	96	1	323
Pend Oreille.....	38	51	90	.....	.....	.....	.....	73	17	.....	81	9	.....	90
Prince.....	300	311	535	1	69	3	3	354	251	6	389	224	1	611

CLASSIFICATION OF BIRTHS, 1917—Concluded.

COUNTIES	SEX		COLOR					NATIVITY OF FATHER			NATIVITY OF MOTHER			Totals
	Male	Female	White	Black	Jap. or Chinese	Indian	Mixed or Others	Native	Foreign	Not Reported	Native	Foreign	Not Reported	
San Juan.....	45	45	82				8	70	20		78	12		90
Staght.....	828	283	589		12	9	4	454	157		474	137		611
Skamania.....	30	19	46		1	1	1	40	9		44	5		49
Snohomish.....	246	286	500		11	17	5	418	299	5	478	154		632
Spokane.....	256	266	521		1			410	110	2	431	91		522
Stevens.....	228	228	450	1		16	7	370	81	3	406	47	1	454
Thurston.....	189	168	341		13	3		288	68	1	286	60	2	357
Wahkiakum.....	37	43	79				1	33	47		42	33		80
Walla Walla.....	276	220	491	1	4			409	84	3	421	74		496
Whatcom.....	230	233	446			7	10	327	131	5	354	108	1	468
Whitman.....	385	336	780					632	98	1	646	85		731
Yakima.....	658	562	1,106	7	41	53	13	1,008	202	10	1,048	172		1,230
Totals.....	12,590	11,580	22,963	62	849	168	108	17,069	6,902	199	18,238	5,896	36	24,170

